



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

April 1, 2021

Mr. David P. Rhoades
Senior Vice President
Exelon Generation Company, LLC
President and Chief Nuclear Officer (CNO)
Exelon Nuclear
4300 Winfield Road
Warrenville, IL 60555

SUBJECT: CLINTON POWER STATION, UNIT NO. 1; DRESDEN NUCLEAR POWER STATION, UNITS 2 AND 3; JAMES A. FITZPATRICK NUCLEAR POWER PLANT; LASALLE COUNTY STATION, UNITS 1 AND 2; NINE MILE POINT NUCLEAR STATION, UNIT 2; PEACH BOTTOM ATOMIC POWER STATION, UNITS 2 AND 3; AND QUAD CITIES NUCLEAR POWER STATION, UNITS 1 AND 2 – ISSUANCE OF AMENDMENTS TO ADOPT TECHNICAL SPECIFICATIONS TASK FORCE TRAVELER TSTF-566 (EPID L-2020-LLA-0077)

Dear Mr. Rhoades:

The U.S. Nuclear Regulatory Commission (NRC, the Commission) has issued the following enclosed amendments in response to the Exelon Generation Company, LLC (Exelon, the licensee) application dated April 13, 2020 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML20104C104), as supplemented by letter dated January 29, 2021 (ADAMS Accession No. ML21029A306):

1. Amendment No. 236 to Facility Operating License No. NPF-62 for Clinton Power Station, Unit No. 1;
2. Amendment No. 274 to Renewed Facility Operating License No. DPR-19 and Amendment No. 267 to Renewed Facility Operating License No. DPR-25 for Dresden Nuclear Power Station, Units 2 and 3, respectively;
3. Amendment No. 340 to Renewed Facility Operating License No. DPR-59 for James A. FitzPatrick Nuclear Power Plant;
4. Amendment No. 248 to Renewed Facility Operating License No. NPF-11 and Amendment No. 234 to Renewed Facility Operating License No. NPF-18 for LaSalle County Station, Units 1 and 2, respectively;
5. Amendment No. 185 to Renewed Facility Operating License No. NPF-69 for Nine Mile Point Nuclear Station, Unit 2;
6. Amendment No. 337 to Subsequent Renewed Facility Operating License No. DPR-44 and Amendment No. 340 to Subsequent Renewed Facility Operating License No. DPR-56 for Peach Bottom Atomic Power Station, Units 2 and 3, respectively; and
7. Amendment No. 286 to Renewed Facility Operating License No. DPR-29 and Amendment No. 282 to Renewed Facility Operating License No. DPR-30 for Quad Cities Nuclear Power Station, Units 1 and 2, respectively.

The amendments revise the technical specifications for each facility to change the required actions for inoperable residual heat removal (RHR) shutdown cooling subsystems. The changes are based on Technical Specifications Task Force (TSTF) traveler TSTF-566, Revision 0, "Revise Actions for Inoperable RHR Shutdown Cooling Subsystems" (ADAMS Accession No. ML18019B187).

A copy of the NRC staff's Safety Evaluation is also enclosed. The Notice of Issuance will be included in the Commission's monthly *Federal Register* notice.

Sincerely,

/RA/

Blake Purnell, Project Manager
Plant Licensing Branch III
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos.: 50-461, 50-237, 50-249, 50-333,
50-373, 50-374, 50-410, 50-277, 50-278,
50-254, and 50-265

Enclosures:

- | | |
|--------------------------------|---------------------------------|
| 1. Amendment No. 236 to NPF-62 | 7. Amendment No. 185 to NPF-69 |
| 2. Amendment No. 274 to DPR-19 | 8. Amendment No. 337 to DPR-44 |
| 3. Amendment No. 267 to DPR-25 | 9. Amendment No. 340 to DPR-56 |
| 4. Amendment No. 340 to DPR-59 | 10. Amendment No. 286 to DPR-29 |
| 5. Amendment No. 248 to NPF-11 | 11. Amendment No. 282 to DPR-30 |
| 6. Amendment No. 234 to NPF-18 | 12. Safety Evaluation |

cc: Listserv



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

EXELON GENERATION COMPANY, LLC

DOCKET NO. 50-461

CLINTON POWER STATION, UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 236
License No. NPF-62

1. The U.S. Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Exelon Generation Company, LLC dated April 13, 2020, as supplemented by letter dated January 29, 2021, 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 Facility Operating License No. NPF-62 is hereby amended to read as follows:

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A and the Environmental Protection Plan contained in Appendix B, as revised through Amendment No. 236, are hereby incorporated into this license. Exelon Generation Company shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

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

FOR THE NUCLEAR REGULATORY COMMISSION

Nancy L. Salgado, Chief
Plant Licensing Branch III
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical Specifications
and Facility Operating License

Date of Issuance: April 1, 2021

ATTACHMENT TO LICENSE AMENDMENT NO. 236

FACILITY OPERATING LICENSE NO. NPF-62

CLINTON POWER STATION, UNIT NO. 1

DOCKET NO. 50-461

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

Remove

License NPF-62

Page 3

TSs

3.4-22

3.4-23

3.4-24

3.4-24a

3.4-26

Insert

License NPF-62

Page 3

TSs

3.4-22

3.4-23

3.4-24

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3.4-26

- (4) Exelon Generation Company, pursuant to the Act and to 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;
 - (5) Exelon Generation Company, 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;
 - (6) Exelon Generation Company, pursuant to the Act and 10 CFR Parts 30, 40, and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of the facility. Mechanical disassembly of the GE14i isotope test assemblies containing Cobalt-60 is not considered separation; and
 - (7) Exelon Generation Company, pursuant to the Act and 10 CFR Parts 30, to intentionally produce, possess, receive, transfer, and use Cobalt-60.
- C. This license shall be deemed to contain and is subject to the conditions specified in the Commission's regulations set forth in 10 CFR Chapter I and is subject to all applicable provisions of the Act and to the rules, regulations and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified or incorporated below:
- (1) Maximum Power Level

Exelon Generation Company is authorized to operate the facility at reactor core power levels not in excess of 3473 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, as revised through Amendment No. 236, are hereby incorporated into this license. Exelon Generation Company shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.9 Residual Heat Removal (RHR) Shutdown Cooling System—Hot Shutdown

LCO 3.4.9 Two RHR shutdown cooling subsystems shall be OPERABLE, and, with no recirculation pump in operation, at least one RHR shutdown cooling subsystem shall be in operation.

-----NOTES-----

1. Both RHR shutdown cooling subsystems and recirculation pumps may be removed from operation for up to 2 hours per 8 hour period.
2. One RHR shutdown cooling subsystem may be inoperable for up to 2 hours for performance of Surveillances.

APPLICABILITY: MODE 3 with reactor steam dome pressure less than the RHR cut in permissive pressure.

ACTIONS

-----NOTE-----

Separate Condition entry is allowed for each RHR shutdown cooling subsystem.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or two RHR shutdown cooling subsystems inoperable.	A.1 Verify an alternate method of decay heat removal is available for each inoperable RHR shutdown cooling subsystem.	1 hour <u>AND</u> Once per 24 hours thereafter
B. Required Action and associated Completion time of Condition A not met.	B.1 Initiate action to restore RHR Shutdown Cooling subsystem(s) to OPERABLE status.	Immediately

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. No RHR shutdown cooling subsystem in operation. <u>AND</u> No recirculation pump in operation.	C.1 Initiate action to restore one RHR shutdown cooling subsystem or one recirculation pump to operation.	Immediately
	<u>AND</u>	
	C.2 Verify reactor coolant circulation by an alternate method.	1 hour from discovery of no reactor coolant circulation
	<u>AND</u>	Once per 12 hours thereafter
	<u>AND</u>	
	C.3 Monitor reactor coolant temperature and pressure.	Once per hour

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.4.9.1 -----NOTE----- Not required to be met until 2 hours after reactor steam dome pressure is less than the RHR cut in permissive pressure. ----- Verify one RHR shutdown cooling subsystem or recirculation pump is operating.	In accordance with the Surveillance Frequency Control program

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.4.9.2	<p>-----NOTE-----</p> <p>Not required to be performed until 12 hours after reactor steam dome pressure is less than the RHR cut in permissive pressure.</p> <p>-----</p> <p>Verify RHR shutdown cooling subsystem locations susceptible to gas accumulation are sufficiently filled with water.</p>	<p>In accordance with the Surveillance Frequency Control program</p>

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. Required Action and associated Completion Time of Condition A not met.	B.1 Initiate action to restore RHR shutdown cooling subsystem(s) to OPERABLE status.	Immediately
C. No RHR shutdown cooling subsystem in operation. <u>AND</u> No recirculation pump in operation.	C.1 Verify reactor coolant circulating by an alternate method. <u>AND</u> C.2 Monitor reactor coolant temperature and pressure.	1 hour from discovery of no reactor coolant circulation <u>AND</u> Once per 12 hours thereafter Once per hour

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.4.10.1 Verify one RHR shutdown cooling subsystem or recirculation pump is operating.	In accordance with the Surveillance Frequency Control Program
SR 3.4.10.2 Verify RHR shutdown cooling subsystem locations susceptible to gas accumulation are sufficiently filled with water.	In accordance with the Surveillance Frequency Control Program



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

EXELON GENERATION COMPANY, LLC

DOCKET NO. 50-237

DRESDEN NUCLEAR POWER STATION, UNIT 2

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 274
Renewed License No. DPR-19

1. The U.S. Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Exelon Generation Company, LLC dated April 13, 2020, as supplemented by letter dated January 29, 2021, 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-19 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 274, are hereby incorporated into this renewed operating 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 60 days of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Nancy L. Salgado, Chief
Plant Licensing Branch III
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical Specifications
and Renewed Facility Operating
License

Date of Issuance: April 1, 2021



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

EXELON GENERATION COMPANY, LLC

DOCKET NO. 50-249

DRESDEN NUCLEAR POWER STATION, UNIT 3

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 267
Renewed License No. DPR-25

1. The U.S. Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Exelon Generation Company, LLC dated April 13, 2020, as supplemented by letter dated January 29, 2021, 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 3.B. of Renewed Facility Operating License No. DPR-25 is hereby amended to read as follows:

B. Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 267, are hereby incorporated into this renewed operating 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 60 days of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Nancy L. Salgado, Chief
Plant Licensing Branch III
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical Specifications
and Renewed Facility Operating
License

Date of Issuance: April 1, 2021

ATTACHMENT TO LICENSE AMENDMENT NOS. 274 AND 267

RENEWED FACILITY OPERATING LICENSE NOS. DPR-19 AND DPR-25

DRESDEN NUCLEAR POWER STATION, UNITS 2 AND 3

DOCKET NOS. 50-237 AND 50-249

Replace the following pages of the Renewed Facility Operating Licenses and Appendix A, Technical Specifications (TSs), with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

Remove

License DPR-19

Page 3

License DPR-25

Page 4

TSs

3.4.7-1

3.4.7-2

3.4.8-1

3.4.8-2

Insert

License DPR-19

Page 3

License DPR-25

Page 4

TSs

3.4.7-1

3.4.7-2

3.4.8-1

3.4.8-2

- (2) Exelon Generation Company, LLC, pursuant to the Act and 10 CFR Part 70, to receive, possess and use at any time special nuclear materials as reactor fuel, in accordance with the limitations for storage and amounts required for reactor operation, as described in the Updated Final Safety Analysis Report, as supplemented and amended;
 - (3) Exelon Generation Company, LLC, 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 Company, LLC, 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 Company, LLC, pursuant to the Act and 10 CFR Parts 30, 40 and 70, to possess, but not separate, such byproduct special nuclear materials as may be produced by the operation of the facility.
- C. This renewed operating license shall be deemed to contain and is subject to the conditions specified in the Commission's regulations set forth in 10 CFR Chapter I; is subject to all applicable provisions of the Act and to the rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified or incorporated below:
- (1) Maximum Power Level

The licensee is authorized to operate the facility at steady state reactor core power levels not in excess of 2957 megawatts thermal (100 percent rated power) in accordance with the conditions specified herein.
 - (2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 274, are hereby incorporated into this renewed operating license. The licensee shall operate the facility in accordance with the Technical Specifications.
 - (3) Operation in the coastdown mode is permitted to 40% power.

f. Surveillance Requirement 4.9.A.10 - Diesel Storage Tank Cleaning
(Unit 3 and Unit 2/3 only)

Each of the above Surveillance Requirements shall be successfully demonstrated prior to entering into MODE 2 on the first plant startup following the fourteenth refueling outage (D3R14).

3. This renewed operating license shall be deemed to contain and is subject to the conditions specified in the following Commission regulations: 10 CFR Part 20, Section 30.34 of 10 CFR Part 30, Section 40.41 of 10 CFR Part 40, Sections 50.54 and 50.59 of 10 CFR Part 50, and Section 70.32 of 10 CFR Part 70; is subject to all applicable provisions of the Act and to the rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified or incorporated below:

A. Maximum Power Level

The licensee is authorized to operate the facility at steady state power levels not in excess of 2957 megawatts (thermal), except that the licensee shall not operate the facility at power levels in excess of five (5) megawatts (thermal), until satisfactory completion of modifications and final testing of the station output transformer, the auto-depressurization interlock, and the feedwater system, as described in the licensee's telegrams; dated February 26, 1971, have been verified in writing by the Commission.

B. Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 267, are hereby incorporated into this renewed operating license. The licensee shall operate the facility in accordance with the Technical Specifications.

C. Reports

The licensee shall make certain reports in accordance with the requirements of the Technical Specifications.

D. Records

The licensee shall keep facility operating records in accordance with the requirements of the Technical Specifications.

E. Restrictions

Operation in the coastdown mode is permitted to 40% power.

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.7 Shutdown Cooling (SDC) System—Hot Shutdown

LC0 3.4.7 Two SDC subsystems shall be OPERABLE, and, with no recirculation pump in operation, at least one SDC subsystem shall be in operation.

- NOTES-----
1. Both required SDC subsystems and recirculation pumps may be not in operation for up to 2 hours per 8 hour period.
 2. One required SDC subsystem may be inoperable for up to 2 hours for the performance of Surveillances.
-

APPLICABILITY: MODE 3, with reactor vessel coolant temperature less than the SDC cut-in permissive temperature.

ACTIONS

-----NOTE-----
Separate Condition entry is allowed for each SDC subsystem.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or two required SDC subsystems inoperable.	A.1 Verify an alternate method of decay heat removal is available for each inoperable required SDC subsystem.	1 hour <u>AND</u> Once per 24 hours thereafter

(continued)

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. Required Action and associated Completion Time of Condition A not met.	B.1 Initiate action to restore required SDC subsystem(s) to OPERABLE status.	Immediately
C. No required SDC subsystem in operation. <u>AND</u> No recirculation pump in operation.	C.1 Initiate action to restore one required SDC subsystem or one recirculation pump to operation. <u>AND</u> C.2 Verify reactor coolant circulation by an alternate method. <u>AND</u> C.3 Monitor reactor coolant temperature and pressure.	Immediately 1 hour from discovery of no reactor coolant circulation <u>AND</u> Once per 12 hours thereafter Once per hour

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.8 Shutdown Cooling (SDC) System—Cold Shutdown

LC0 3.4.8 Two SDC subsystems shall be OPERABLE, and, with no recirculation pump in operation, at least one SDC subsystem shall be in operation.

- NOTES-----
1. Both required SDC subsystems may be not in operation during hydrostatic testing.
 2. Both required SDC subsystems and recirculation pumps may be not in operation for up to 2 hours per 8 hour period.
 3. One required SDC subsystem may be inoperable for up to 2 hours for the performance of Surveillances.
-

APPLICABILITY: MODE 4.

ACTIONS

-----NOTE-----
Separate Condition entry is allowed for each shutdown cooling subsystem.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or two required SDC subsystems inoperable.	A.1 Verify an alternate method of decay heat removal is available for each inoperable required SDC subsystem.	1 hour <u>AND</u> Once per 24 hours thereafter
B. Required Action and associated Completion Time of Condition A not met.	B.1 Initiate action to restore required SDC subsystem(s) to OPERABLE status.	Immediately

(continued)

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. No required SDC subsystem in operation. <u>AND</u> No recirculation pump in operation.	C.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> C.2 Monitor reactor coolant temperature and pressure.	Once per hour

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.4.8.1 Verify one SDC subsystem or recirculation pump is operating.	In accordance with the Surveillance Frequency Control Program
SR 3.4.8.2 Verify SDC subsystem locations susceptible to gas accumulation are sufficiently filled with water.	In accordance with the Surveillance Frequency Control Program



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

EXELON FITZPATRICK, LLC

AND

EXELON GENERATION COMPANY, LLC

DOCKET NO. 50-333

JAMES A. FITZPATRICK NUCLEAR POWER PLANT

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 340
Renewed License No. DPR-59

1. The U.S. Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Exelon Generation Company, LLC dated April 13, 2020, as supplemented by letter dated January 29, 2021, 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-59 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 340, are hereby incorporated in the renewed operating 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 60 days of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Nancy L. Salgado, Chief
Plant Licensing Branch III
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical Specifications
and Renewed Facility Operating
License

Date of Issuance: April 1, 2021

ATTACHMENT TO LICENSE AMENDMENT NO. 340
RENEWED FACILITY OPERATING LICENSE NO. DPR-59
JAMES A. FITZPATRICK NUCLEAR POWER PLANT
DOCKET NO. 50-333

Replace the following pages of the Renewed Facility Operating License and Appendix A, Technical Specifications (TSs), with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

Remove

License DPR-59
Page 3

TSs
3.4.7-1
3.4.8-1

Insert

License DPR-59
Page 3

TSs
3.4.7-1
3.4.8-1

- (4) Exelon Generation Company 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 without restriction to chemical or physical form, for sample analysis or instrument calibration; or associated with radioactive apparatus, components or tools.
 - (5) Pursuant to the Act and 10 CFR Parts 30 and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of the facility.
- C. This renewed operating license shall be deemed to contain and is subject to the conditions specified in the following Commission regulations in 10 CFR Chapter I: Part 20, Section 30.34 of Part 30, Section 40.41 of Part 40, 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 to the rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified or incorporated below:
- (1) Maximum Power Level

Exelon Generation Company is authorized to operate the facility at steady state reactor core power levels not in excess of 2536 megawatts (thermal).
 - (2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 340, are hereby incorporated in the renewed operating license. The licensee shall operate the facility in accordance with the Technical Specifications.
 - (3) Fire Protection

Exelon Generation Company shall implement and maintain in effect all provisions of the approved fire protections program as described in the Final Safety Analysis Report for the facility and as approved in the SER dated November 20, 1972; the SER Supplement No. 1 dated February 1, 1973; the SER Supplement No. 2 dated October 4, 1974; the SER dated August 1, 1979; the SER Supplement dated October 3, 1980; the SER Supplement dated February 13, 1981; the NRC Letter dated February 24, 1981; Technical Specification Amendments 34 (dated January 31, 1978), 80 (dated May 22, 1984), 134 (dated July 19, 1989), 135 (dated September 5, 1989), 142 (dated October 23, 1989), 164 (dated August 10, 1990), 176 (dated January 16, 1992), 177 (dated February 10, 1992), 186 (dated February 19, 1993), 190 (dated June 29, 1993), 191 (dated July 7, 1993), 206 (dated February 28, 1994), and 214 (dated June 27, 1994); and NRC Exemptions and associated safety evaluations dated April 26, 1983, July 1, 1983, January 11, 1985,

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.7 Residual Heat Removal (RHR) Shutdown Cooling System-Hot Shutdown

LCO 3.4.7 Two RHR shutdown cooling subsystems shall be OPERABLE.

----- NOTE-----
One RHR shutdown cooling subsystem may be inoperable for up to 2 hours for the performance of Surveillances.

APPLICABILITY: MODE 3, with reactor steam dome pressure less than the RHR cut in permissive pressure.

ACTIONS

----- NOTE-----
Separate Condition entry is allowed for each RHR shutdown cooling subsystem.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or two RHR shutdown cooling subsystems inoperable.	A.1 Verify an alternate method of decay heat removal is available for each inoperable RHR shutdown cooling subsystem.	1 hour <u>AND</u> Once per 24 hours thereafter
B. Required Action and associated Completion Time of Condition A not met.	B.1 Initiate action to restore RHR shutdown cooling subsystem(s) to OPERABLE status.	Immediately

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.8 Residual Heat Removal (RHR) Shutdown Cooling System – Cold Shutdown

LCO 3.4.8 Two RHR shutdown cooling subsystems shall be OPERABLE.

----- NOTE -----
 One RHR shutdown cooling subsystem may be inoperable for up to 2 hours for the performance of Surveillances.

APPLICABILITY: MODE 4.

ACTIONS

----- NOTE -----
 Separate Condition entry is allowed for each shutdown cooling subsystem.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or two RHR shutdown cooling subsystems inoperable.	A.1 Verify an alternate method of decay heat removal is available for each inoperable RHR shutdown cooling subsystem.	1 hour <u>AND</u> Once per 24 hours thereafter
B. Required Action and associated Completion Time of Condition A not met.	B.1 Initiate action to restore RHR shutdown cooling subsystem(s) to OPERABLE status.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.4.8.1 Verify each RHR shutdown cooling 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, or can be aligned to the correct position.	In accordance with the Surveillance Frequency Control Program



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

EXELON GENERATION COMPANY, LLC

DOCKET NO. 50-373

LASALLE COUNTY STATION, UNIT 1

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 248
Renewed License No. NPF-11

1. The U.S. Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Exelon Generation Company, LLC dated April 13, 2020, as supplemented by letter dated January 29, 2021, 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-11 is hereby amended to read as follows:

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 248, and the Environmental Protection Plan contained in Appendix B, are hereby incorporated in the renewed license. The licensee shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

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

FOR THE NUCLEAR REGULATORY COMMISSION

Nancy L. Salgado, Chief
Plant Licensing Branch III
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical Specifications
and Renewed Facility Operating
License

Date of Issuance: April 1, 2021



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

EXELON GENERATION COMPANY, LLC

DOCKET NO. 50-374

LASALLE COUNTY STATION, UNIT 2

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 234
Renewed License No. NPF-18

1. The U.S. Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Exelon Generation Company, LLC dated April 13, 2020, as supplemented by letter dated January 29, 2021, 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-18 is hereby amended to read as follows:

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 234, and the Environmental Protection Plan contained in Appendix B, are hereby incorporated in the renewed license. The licensee shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

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

FOR THE NUCLEAR REGULATORY COMMISSION

Nancy L. Salgado, Chief
Plant Licensing Branch III
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical Specifications
and Renewed Facility Operating
License

Date of Issuance: April 1, 2021

ATTACHMENT TO LICENSE AMENDMENT NOS. 248 AND 234

RENEWED FACILITY OPERATING LICENSE NOS. NPF-11 AND NPF-18

LASALLE COUNTY STATION, UNITS 1 AND 2

DOCKET NOS. 50-373 AND 50-374

Replace the following pages of the Renewed Facility Operating Licenses and Appendix A, Technical Specifications (TSs), with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

Remove

License NPF-11
Page 3

License NPF-18
Page 3

TSs
3.4.9-1
3.4.9-2
3.4.10-2

Insert

License NPF-11
Page 3

License NPF-18
Page 3

TSs
3.4.9-1
3.4.9-2
3.4.10-2

- (3) Exelon Generation Company, LLC, 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;
- Am. 146
01/12/01 (4) Exelon Generation Company, LLC, 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
- Am. 202
07/21/11 (5) Exelon Generation Company, LLC, pursuant to the Act and 10 CFR Parts 30, 40, and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of LaSalle County Station, Units 1 and 2, and such Class B and Class C low-level radioactive waste as may be produced by the operation of Braidwood Station, Units 1 and 2, Byron Station, Units 1 and 2, and Clinton Power Station, Unit 1.
- C. This renewed license shall be deemed to contain and is subject to the conditions specified in the Commission's regulations set forth in 10 CFR Chapter I and is subject to all applicable provisions of the Act and to the rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified or incorporated below:
- Am. 198
09/16/10 (1) Maximum Power Level
The licensee is authorized to operate the facility at reactor core power levels not in excess of full power (3546 megawatts thermal).
- Am. 248
04/01/21 (2) Technical Specifications and Environmental Protection Plan
The Technical Specifications contained in Appendix A, as revised through Amendment No. 248, and the Environmental Protection Plan contained in Appendix B, are hereby incorporated in the renewed license. The licensee shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.
- Am. 194
08/28/09 (3) DELETED
- Am. 194
08/28/09 (4) DELETED
- Am. 194
08/28/09 (5) DELETED

- (2) Pursuant to the Act and 10 CFR Part 70, to receive, possess and use at any time special nuclear material as reactor fuel, in accordance with the limitations for storage and amounts required for reactor operation, as described in the Final Safety Analysis Report, as supplemented and amended;
- (3) 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) 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 Company, LLC, pursuant to the Act and 10 CFR Parts 30, 40, and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of LaSalle County Station, Units 1 and 2, and such Class B and Class C low-level radioactive waste as may be produced by the operation of Braidwood Station, Units 1 and 2, Byron Station, Units 1 and 2, and Clinton Power Station, Unit 1.

Am. 189
07/21/11

C. This renewed license shall be deemed to contain and is subject to the conditions specified in the Commission's regulations set forth in 10 CFR Chapter I and is subject to all applicable provisions of the Act and to the rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified or incorporated below:

Am. 185
09/16/10

(1) Maximum Power Level

The licensee is authorized to operate the facility at reactor core power levels not in excess of full power (3546 megawatts thermal). Items in Attachment 1 shall be completed as specified. Attachment 1 is hereby incorporated into this license.

Am. 234
04/01/21

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 234, and the Environmental Protection Plan contained in Appendix B, are hereby incorporated in the renewed license. The licensee shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.9 Residual Heat Removal (RHR) Shutdown Cooling System—Hot Shutdown

LC0 3.4.9 Two RHR shutdown cooling subsystems shall be OPERABLE, and, with no recirculation pump in operation, at least one RHR shutdown cooling subsystem shall be in operation.

- NOTES-----
1. Both RHR shutdown cooling subsystems and recirculation pumps may be not in operation for up to 2 hours per 8 hour period.
 2. One RHR shutdown cooling subsystem may be inoperable for up to 2 hours for performance of Surveillances.
-

APPLICABILITY: MODE 3 with reactor vessel pressure less than the RHR cut-in permissive pressure.

ACTIONS

-----NOTE-----
Separate Condition entry is allowed for each RHR shutdown cooling subsystem.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or two RHR shutdown cooling subsystems inoperable.	A.1 Verify an alternate method of decay heat removal is available for each inoperable RHR shutdown cooling subsystem.	1 hour <u>AND</u> Once per 24 hours thereafter

(continued)

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. Required Action and associated Completion Time of Condition A not met.	B.1 Initiate action to restore RHR shutdown cooling subsystem(s) to OPERABLE status.	Immediately
C. No RHR shutdown cooling subsystem in operation. <u>AND</u> No recirculation pump in operation.	C.1 Initiate action to restore one RHR shutdown cooling subsystem or one recirculation pump to operation. <u>AND</u> C.2 Verify reactor coolant circulation by an alternate method. <u>AND</u> C.3 Monitor reactor coolant temperature and pressure.	Immediately 1 hour from discovery of no reactor coolant circulation <u>AND</u> Once per 12 hours thereafter Once per hour

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. Required Action and associated Completion Time of Condition A not met.	B.1 Initiate action to restore RHR shutdown cooling subsystem(s) to OPERABLE status.	Immediately
C. No RHR shutdown cooling subsystem in operation. <u>AND</u> No recirculation pump in operation.	C.1 Verify reactor coolant circulating by an alternate method. <u>AND</u> C.2 Monitor reactor coolant temperature and pressure.	1 hour from discovery of no reactor coolant circulation <u>AND</u> Once per 12 hours thereafter Once per hour

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.4.10.1 Verify one RHR shutdown cooling subsystem or recirculation pump is operating.	In accordance with the Surveillance Frequency Control Program
SR 3.4.10.2 Verify RHR shutdown cooling subsystem locations susceptible to gas accumulation are sufficiently filled with water.	In accordance with the Surveillance Frequency Control Program



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

NINE MILE POINT NUCLEAR STATION, LLC

LONG ISLAND LIGHTING COMPANY

EXELON GENERATION COMPANY, LLC

DOCKET NO. 50-410

NINE MILE POINT NUCLEAR STATION, UNIT 2

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 185
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 dated April 13, 2020, as supplemented by letter dated January 29, 2021, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Renewed Facility Operating License No. NPF-69 is hereby amended to read as follows:

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A and the Environmental Protection Plan contained in Appendix B, both of which are attached hereto, as revised through Amendment No. 185, are hereby incorporated into this license. Exelon Generation shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

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

FOR THE NUCLEAR REGULATORY COMMISSION

Nancy L. Salgado, Chief
Plant Licensing Branch III
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical Specifications
and Renewed Facility Operating
License

Date of Issuance: April 1, 2021

ATTACHMENT TO LICENSE AMENDMENT NO. 185

RENEWED FACILITY OPERATING LICENSE NO. NPF-69

NINE MILE POINT NUCLEAR STATION, UNIT 2

DOCKET NO. 50-410

Replace the following pages of the Renewed Facility Operating License and Appendix A, Technical Specifications (TSs), with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

Remove

License NPF-69

Page 4

TSs

3.4.9-1

3.4.9-2

3.4.10-2

Insert

License NPF-69

Page 4

TSs

3.4.9-1

3.4.9-2

3.4.10-2

(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. 185, 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.

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.9 Residual Heat Removal (RHR) Shutdown Cooling System – Hot Shutdown

LCO 3.4.9 Two RHR shutdown cooling subsystems shall be OPERABLE, and, with no recirculation pump in operation, at least one RHR shutdown cooling subsystem shall be in operation.

-----NOTES-----

1. Both RHR shutdown cooling subsystems and recirculation pumps may be not in operation for up to 2 hours per 8 hour period.
2. One RHR shutdown cooling subsystem may be inoperable for up to 2 hours for performance of Surveillances.

APPLICABILITY: MODE 3 with reactor steam dome pressure less than the RHR cut-in permissive pressure.

ACTIONS

----- NOTE -----
Separate Condition entry is allowed for each RHR shutdown cooling subsystem.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or two RHR shutdown cooling subsystems inoperable.	A.1 Verify an alternate method of decay heat removal is available for each inoperable RHR shutdown cooling subsystem.	1 hour <u>AND</u> Once per 24 hours thereafter

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. Required Action and associated Completion Time of Condition A not met.	B.1 Initiate action to restore RHR shutdown cooling subsystem(s) to OPERABLE status.	Immediately
C. No RHR shutdown cooling subsystem in operation. <u>AND</u> No recirculation pump in operation.	C.1 Initiate action to restore one RHR shutdown cooling subsystem or one recirculation pump to operation.	Immediately
	<u>AND</u> C.2 Verify reactor coolant circulation by an alternate method.	1 hour from discovery of no reactor coolant circulation <u>AND</u> Once per 12 hours thereafter
	<u>AND</u> C.3 Monitor reactor coolant temperature and pressure.	Once per hour

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. Required Action and associated Completion Time of Condition A not met.	B.1 Initiate action to restore RHR shutdown cooling subsystem(s) to OPERABLE status.	Immediately
C. No RHR shutdown cooling subsystem in operation. <u>AND</u> No recirculation pump in operation.	C.1 Verify reactor coolant circulating by an alternate method. <u>AND</u> C.2 Monitor reactor coolant temperature and pressure.	1 hour from discovery of no reactor coolant circulation <u>AND</u> Once per 12 hours thereafter Once per hour

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.4.10.1	Verify one RHR shutdown cooling subsystem or recirculation pump is operating.	In accordance with the Surveillance Frequency Control Program
SR 3.4.10.2	Verify RHR shutdown cooling subsystem locations susceptible to gas accumulation are sufficiently filled with water.	In accordance with the Surveillance Frequency Control Program



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

EXELON GENERATION COMPANY, LLC

PSEG NUCLEAR, LLC

DOCKET NO. 50-277

PEACH BOTTOM ATOMIC POWER STATION, UNIT 2

AMENDMENT TO SUBSEQUENT RENEWED FACILITY OPERATING LICENSE

Amendment No. 337
Subsequent Renewed License No. DPR-44

1. The U.S. Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Exelon Generation Company, LLC dated April 13, 2020, as supplemented by letter dated January 29, 2021, 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 Subsequent Renewed Facility Operating License No. DPR-44 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 337, are hereby incorporated in the license. Exelon Generation Company 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 60 days of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Nancy L. Salgado, Chief
Plant Licensing Branch III
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical Specifications
and Subsequent Renewed Facility
Operating License

Date of Issuance: April 1, 2021

ATTACHMENT TO LICENSE AMENDMENT NO. 337

SUBSEQUENT RENEWED FACILITY OPERATING LICENSE NO. DPR-44

PEACH BOTTOM ATOMIC POWER STATION, UNIT 2

DOCKET NO. 50-277

Replace the following pages of the Subsequent Renewed Facility Operating License and Appendix A, Technical Specifications (TSs), with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

Remove

License DPR-44

Page 3

TSs

3.4-16

3.4-17

3.4-19

3.4-20

Insert

License DPR-44

Page 3

TSs

3.4-16

3.4-17

3.4-19

3.4-20

- (2) Exelon Generation Company, pursuant to the Act and 10 CFR Part 70, to receive, possess, and use at any time special nuclear material as reactor fuel, in accordance with the limitations for storage and amounts required for reactor operation, as described in the Final Safety Analysis Report, as supplemented and amended;
- (3) Exelon Generation Company, 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 Company, 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 when associated with radioactive apparatus or components;
- (5) Exelon Generation Company, pursuant to the Act and 10 CFR Parts 30 and 70, to possess, but not to separate, such byproduct and special nuclear material as may be produced by operation of the facility, and such Class B and Class C low-level radioactive waste as may be produced by the operation of Limerick Generating Station, Units 1 and 2.

C. This subsequent renewed license shall be deemed to contain and is subject to the conditions specified in the following Commission regulations in 10 CFR Chapter I: Part 20, Section 30.34 of Part 30, Section 40.41 of Part 40, Section 50.54 of Part 50, and Section 70.32 of Part 70; all applicable provisions of the Act and the 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 Company is authorized to operate the Peach Bottom Atomic Power Station, Unit 2, at steady state reactor core power levels not in excess of 4016 megawatts thermal.

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 337, are hereby incorporated in the license. Exelon Generation Company shall operate the facility in accordance with the Technical Specifications.

(3) Physical Protection

Exelon Generation Company shall fully implement and maintain in effect all provisions of the Commission-approved physical security, training and qualification, and safeguards contingency plans including amendments made pursuant to provisions of the Miscellaneous Amendments and Search Requirements revisions to 10 CFR 73.55 (51 FR 27817 and

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.7 Residual Heat Removal (RHR) Shutdown Cooling System—Hot Shutdown

LC0 3.4.7 Two RHR shutdown cooling subsystems shall be OPERABLE, and, with no recirculation pump in operation, at least one RHR shutdown cooling subsystem shall be in operation.

- NOTES-----
1. Both required RHR shutdown cooling subsystems and recirculation pumps may be removed from operation for up to 2 hours per 8 hour period.
 2. One required RHR shutdown cooling subsystem may be inoperable for up to 2 hours for performance of Surveillances.
-

APPLICABILITY: MODE 3, with reactor steam dome pressure less than the RHR shutdown cooling isolation pressure.

ACTIONS

-----NOTE-----
Separate Condition entry is allowed for each RHR shutdown cooling subsystem.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or two required RHR shutdown cooling subsystems inoperable.	A.1 Verify an alternate method of decay heat removal is available for each required inoperable RHR shutdown cooling subsystem.	1 hour <u>AND</u> Once per 12 hours thereafter

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. Required Action and associated Completion Time of Condition A not met.	B.1 Initiate action to restore required RHR shutdown cooling subsystem(s) to OPERABLE status.	Immediately
C. No RHR shutdown cooling subsystem in operation. <u>AND</u> No recirculation pump in operation.	C.1 Initiate action to restore one RHR shutdown cooling subsystem or one recirculation pump to operation. <u>AND</u> C.2 Verify reactor coolant circulation by an alternate method. <u>AND</u> C.3 Monitor reactor coolant temperature and pressure.	Immediately 1 hour from discovery of no reactor coolant circulation <u>AND</u> Once per 12 hours thereafter Once per hour

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.8 Residual Heat Removal (RHR) Shutdown Cooling System—Cold Shutdown

LCO 3.4.8 Two RHR shutdown cooling subsystems shall be OPERABLE, and, with no recirculation pump in operation, at least one RHR shutdown cooling subsystem shall be in operation.

- NOTES-----
1. Both required RHR shutdown cooling subsystems and recirculation pumps may be removed from operation for up to 2 hours per 8 hour period.
 2. One required RHR shutdown cooling subsystem may be inoperable for up to 2 hours for performance of Surveillances.
-

APPLICABILITY: MODE 4.

ACTIONS

-----NOTE-----
Separate Condition entry is allowed for each RHR shutdown cooling subsystem.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or two required RHR shutdown cooling subsystems inoperable.	A.1 Verify an alternate method of decay heat removal is available for each inoperable required RHR shutdown cooling subsystem.	1 hour <u>AND</u> Once per 24 hours thereafter
B. Required Action and associated Completion Time of Condition A not met.	B.1 Initiate action to restore required RHR shutdown cooling subsystem(s) to OPERABLE status.	Immediately

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. No RHR shutdown cooling subsystem in operation. <u>AND</u> No recirculation pump in operation.	C.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> C.2 Monitor reactor coolant temperature and pressure.	Once per hour

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.4.8.1 Verify one required RHR shutdown cooling subsystem or recirculation pump is operating.	In accordance with the Surveillance Frequency Control Program.
SR 3.4.8.2 -----NOTE----- HPSW system related components are excluded. ----- Verify required RHR shutdown cooling subsystem locations susceptible to gas accumulation are sufficiently filled with water.	In accordance with the Surveillance Frequency Control Program.



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

EXELON GENERATION COMPANY, LLC

PSEG NUCLEAR, LLC

DOCKET NO. 50-278

PEACH BOTTOM ATOMIC POWER STATION, UNIT 3

AMENDMENT TO SUBSEQUENT RENEWED FACILITY OPERATING LICENSE

Amendment No. 340
Subsequent Renewed License No. DPR-56

1. The U.S. Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Exelon Generation Company, LLC dated April 13, 2020, as supplemented by letter dated January 29, 2021, 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 Subsequent Renewed Facility Operating License No. DPR-56 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 340, are hereby incorporated in the license. Exelon Generation Company 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 60 days of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Nancy L. Salgado, Chief
Plant Licensing Branch III
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical Specifications
and Subsequent Renewed Facility
Operating License

Date of Issuance: April 1, 2021

ATTACHMENT TO LICENSE AMENDMENT NO. 340

SUBSEQUENT RENEWED FACILITY OPERATING LICENSE NO. DPR-56

PEACH BOTTOM ATOMIC POWER STATION, UNIT 3

DOCKET NO. 50-278

Replace the following pages of the Subsequent Renewed Facility Operating License and Appendix A, Technical Specifications (TSs), with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

Remove

License DPR-56

Page 3

TSs

3.4-16

3.4-17

3.4-19

3.4-20

Insert

License DPR-56

Page 3

TSs

3.4-16

3.4-17

3.4-19

3.4-20

- (2) Exelon Generation Company, pursuant to the Act and 10 CFR Part 70, to receive, possess, and use at any time special nuclear material as reactor fuel, in accordance with the limitations for storage and amounts required for reactor operation, as described in the Final Safety Analysis Report, as supplemented and amended;
- (3) Exelon Generation Company, 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 Company, 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 when associated with radioactive apparatus or components;
- (5) Exelon Generation Company, pursuant to the Act and 10 CFR Parts 30 and 70, to possess, but not to separate, such byproduct and special nuclear material as may be produced by operation of the facility, and such Class B and Class C low-level radioactive waste as may be produced by the operation of Limerick Generating Station, Units 1 and 2.

C. This subsequent renewed license shall be deemed to contain and is subject to the conditions specified in the following Commission regulations in 10 CFR Chapter I: Part 20, Section 30.34 of Part 30, Section 40.41 of Part 40, Section 50.54 of Part 50, and Section 70.32 of Part 70; all applicable provisions of the Act and the 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 Company is authorized to operate the Peach Bottom Atomic Power Station, Unit No. 3, at steady state reactor core power levels not in excess of 4016 megawatts thermal.

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 340, are hereby incorporated in the license. Exelon Generation Company shall operate the facility in accordance with the Technical Specifications.

(3) Physical Protection

Exelon Generation Company shall fully implement and maintain in effect all provisions of the Commission-approved physical security, training and qualification, and safeguards contingency plans including amendments made pursuant to provisions of the Miscellaneous Amendments and Search Requirements revisions to 10 CFR 73.55 (51 FR 27817 and

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.7 Residual Heat Removal (RHR) Shutdown Cooling System—Hot Shutdown

LCO 3.4.7 Two RHR shutdown cooling subsystems shall be OPERABLE, and, with no recirculation pump in operation, at least one RHR shutdown cooling subsystem shall be in operation.

-----NOTES-----

1. Both required RHR shutdown cooling subsystems and recirculation pumps may be removed from operation for up to 2 hours per 8 hour period.
 2. One required RHR shutdown cooling subsystem may be inoperable for up to 2 hours for performance of Surveillances.
-

APPLICABILITY: MODE 3, with reactor steam dome pressure less than the RHR shutdown cooling isolation pressure.

ACTIONS

-----NOTE-----
Separate Condition entry is allowed for each RHR shutdown cooling subsystem.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or two required RHR shutdown cooling subsystems inoperable.	A.1 Verify an alternate method of decay heat removal is available for each required inoperable RHR shutdown cooling subsystem.	1 hour <u>AND</u> Once per 24 hours thereafter

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. Required Action and associated Completion Time of Condition A not met.	B.1 Initiate action to restore required RHR shutdown cooling subsystem(s) to OPERABLE status.	Immediately
C. No RHR shutdown cooling subsystem in operation. <u>AND</u> No recirculation pump in operation.	C.1 Initiate action to restore one RHR shutdown cooling subsystem or one recirculation pump to operation. <u>AND</u> C.2 Verify reactor coolant circulation by an alternate method. <u>AND</u> C.3 Monitor reactor coolant temperature and pressure.	Immediately 1 hour from discovery of no reactor coolant circulation <u>AND</u> Once per 12 hours thereafter Once per hour

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.8 Residual Heat Removal (RHR) Shutdown Cooling System—Cold Shutdown

LCO 3.4.8 Two RHR shutdown cooling subsystems shall be OPERABLE, and, with no recirculation pump in operation, at least one RHR shutdown cooling subsystem shall be in operation.

-----NOTES-----

1. Both required RHR shutdown cooling subsystems and recirculation pumps may be removed from operation for up to 2 hours per 8 hour period.
 2. One required RHR shutdown cooling subsystem may be inoperable for up to 2 hours for performance of Surveillances.
-

APPLICABILITY: MODE 4.

ACTIONS

-----NOTE-----
Separate Condition entry is allowed for each RHR shutdown cooling subsystem.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or two required RHR shutdown cooling subsystems inoperable.	A.1 Verify an alternate method of decay heat removal is available for each inoperable required RHR shutdown cooling subsystem.	1 hour <u>AND</u> Once per 24 hours thereafter
B. Required Action and associated Completion Time of Condition A not met.	B.1 Initiate action to restore required RHR shutdown cooling subsystem(s) to OPERABLE status.	Immediately

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. No RHR shutdown cooling subsystem in operation. <u>AND</u> No recirculation pump in operation.	C.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> C.2 Monitor reactor coolant temperature and pressure.	Once per hour

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.4.8.1 Verify one required RHR shutdown cooling subsystem or recirculation pump is operating.	In accordance with the Surveillance Frequency Control Program.
SR 3.4.8.2 -----NOTE----- HPSW system related components are excluded. ----- Verify required RHR shutdown cooling subsystem locations susceptible to gas accumulation are sufficiently filled with water.	In accordance with the Surveillance Frequency Control Program.



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

EXELON GENERATION COMPANY, LLC

AND

MIDAMERICAN ENERGY COMPANY

DOCKET NO. 50-254

QUAD CITIES NUCLEAR POWER STATION, UNIT 1

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 286
Renewed License No. DPR-29

1. The U.S. Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Exelon Generation Company, LLC dated April 13, 2020, as supplemented by letter dated January 29, 2021, 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 3.B. of Renewed Facility Operating License No. DPR-29 is hereby amended to read as follows:

B. Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 286, are hereby incorporated into this renewed operating 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 90 days of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Nancy L. Salgado, Chief
Plant Licensing Branch III
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical Specifications
and Renewed Facility Operating
License

Date of Issuance: April 1, 2021



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

EXELON GENERATION COMPANY, LLC

AND

MIDAMERICAN ENERGY COMPANY

DOCKET NO. 50-265

QUAD CITIES NUCLEAR POWER STATION, UNIT 2

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 282
Renewed License No. DPR-30

1. The U.S. Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Exelon Generation Company, LLC dated April 13, 2020, as supplemented by letter dated January 29, 2021, 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 3.B. of Renewed Facility Operating License No. DPR-30 is hereby amended to read as follows:

B. Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 282, are hereby incorporated into this renewed operating 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 90 days of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Nancy L. Salgado, Chief
Plant Licensing Branch III
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical Specifications
and Renewed Facility Operating
License

Date of Issuance: April 1, 2021

ATTACHMENT TO LICENSE AMENDMENT NOS. 286 AND 282

RENEWED FACILITY OPERATING LICENSE NOS. DPR-29 AND DPR-30

QUAD CITIES NUCLEAR POWER STATION, UNITS 1 AND 2

DOCKET NOS. 50-254 AND 50-265

Replace the following pages of the Renewed Facility Operating Licenses and Appendix A, Technical Specifications (TSs), with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

Remove

License DPR-29

Page 4

License DPR-30

Page 4

TSs

3.4.7-1

3.4.7-2

3.4.8-2

Insert

License DPR-29

Page 4

License DPR-30

Page 4

TSs

3.4.7-1

3.4.7-2

3.4.8-2

B. Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 286, are hereby incorporated into this renewed operating license. The licensee shall operate the facility in accordance with the Technical Specifications.

C. The licensee shall maintain the commitments made in response to the March 14, 1983, NUREG-0737 Order, subject to the following provision:

The licensee may make changes to commitments made in response to the March 14, 1983, NUREG-0737 Order without prior approval of the Commission as long as the change would be permitted without NRC approval, pursuant to the requirements of 10 CFR 50.59. Consistent with this regulation, if the change results in an Unreviewed Safety Question, a license amendment shall be submitted to the NRC staff for review and approval prior to implementation of the change.

D. Equalizer Valve Restriction

Three of the four valves in the equalizer piping between the recirculation loops shall be closed at all times during reactor operation with one bypass valve open to allow for thermal expansion of water.

E. The licensee shall fully implement and maintain in effect all provisions of the Commission-approved physical security, training and qualification, and safeguards contingency plans including amendments made pursuant to provisions of the Miscellaneous Amendments and Search Requirements revisions to 10 CFR 73.55 (51 FR 27817 and 27822), and the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The combined sets of plans¹, which contain Safeguards Information protected under 10 CFR 73.21, is entitled: "Quad Cities Nuclear Power Station Security Plan, Training and Qualification Plan, and Safeguards Contingency Plan, Revision 2," submitted by letter dated May 17, 2006.

Exelon Generation Company shall fully implement and maintain in effect all provisions of the Commission-approved cyber security plan (CSP), including changes made pursuant to the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The Exelon Generation Company CSP was approved by License Amendment No. 249 as modified by License Amendment No. 259.

F. The licensee shall implement and maintain in effect all provisions of the approved fire protection program as described in the Updated Final Safety Analysis Report for the facility and as approved in the Safety Evaluation Reports dated July 27, 1979 with supplements dated November 5, 1980, and

¹ The Training and Qualification Plan and Safeguards Contingency Plan are Appendices to the Security Plan.

B. Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 282, are hereby incorporated into this renewed operating license. The licensee shall operate the facility in accordance with the Technical Specifications.

C. The licensee shall maintain the commitments made in response to the March 14, 1983, NUREG-0737 Order, subject to the following provision:

The licensee may make changes to commitments made in response to the March 14, 1983, NUREG-0737 Order without prior approval of the Commission as long as the change would be permitted without NRC approval, pursuant to the requirements of 10 CFR 50.59. Consistent with this regulation, if the change results in an Unreviewed Safety Question, a license amendment shall be submitted to the NRC staff for review and approval prior to implementation of the change.

D. Equalizer Valve Restriction

Three of the four valves in the equalizer piping between the recirculation loops shall be closed at all times during reactor operation with one bypass valve open to allow for thermal expansion of water.

E. The licensee shall fully implement and maintain in effect all provisions of the Commission-approved physical security, training and qualification, and safeguards contingency plans including amendments made pursuant to provisions of the Miscellaneous Amendments and Search Requirements revisions to 10 CFR 73.55 (51 FR 27817 and 27822), and the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The combined set of plans¹, which contain Safeguards Information protected under 10 CFR 73.21, is entitled: "Quad Cities Nuclear Power Station Security Plan, Training and Qualification Plan, and Safeguards Contingency Plan, Revision 2," submitted by letter dated May 17, 2006.

Exelon Generation Company shall fully implement and maintain in effect all provisions of the Commission-approved cyber security plan (CSP), including changes made pursuant to the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The Exelon Generation Company CSP was approved by License Amendment No. 244 and modified by License Amendment No. 254.

F. The licensee shall implement and maintain in effect all provisions of the approved fire protection program as described in the Updated Final Safety Analysis Report for the facility and as approved in the Safety Evaluation Reports dated July 27, 1979 with supplements dated

¹ The Training and Qualification Plan and Safeguards Contingency Plan are Appendices to the Security Plan.

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.7 Residual Heat Removal (RHR) Shutdown Cooling System—Hot Shutdown

LC0 3.4.7 Two RHR shutdown cooling subsystems shall be OPERABLE.

-----NOTE-----
One RHR shutdown cooling subsystem may be inoperable for up to 2 hours for the performance of Surveillances.

APPLICABILITY: MODE 3, with reactor steam dome pressure less than the RHR cut-in permissive pressure.

ACTIONS

----- NOTE -----
Separate Condition entry is allowed for each RHR shutdown cooling subsystem.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or two RHR shutdown cooling subsystems inoperable.	A.1 Verify an alternate method of decay heat removal is available for each inoperable RHR shutdown cooling subsystem.	1 hour <u>AND</u> Once per 24 hours thereafter (continued)

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. (continued)	<p><u>AND</u></p> <p>A.2 -----NOTE----- Only applicable if both RHR shutdown cooling subsystems are inoperable. -----</p> <p>Verify reactor coolant circulation by an alternate method.</p> <p><u>AND</u></p> <p>A.3 -----NOTE----- Only applicable if both RHR shutdown cooling subsystems are inoperable. -----</p> <p>Monitor reactor coolant temperature and pressure.</p>	<p>1 hour</p> <p><u>AND</u></p> <p>Once per 12 hours thereafter</p> <p>Once per hour</p>
B. Required Action and associated Completion Time of Condition A not met.	B.1 Initiate action to restore RHR shutdown cooling subsystem(s) to OPERABLE status.	Immediately

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. (continued)	<p>A.2 -----NOTE----- Only applicable if both RHR shutdown cooling subsystems are inoperable. -----</p> <p>Verify reactor coolant circulating by an alternate method.</p>	<p>1 hour</p> <p><u>AND</u></p> <p>Once per 12 hours thereafter</p>
	<p><u>AND</u></p> <p>A.3 -----NOTE----- Only applicable if both RHR shutdown cooling subsystems are inoperable. -----</p> <p>Monitor reactor coolant temperature and pressure.</p>	<p>Once per hour</p>
B. Required Action and associated Completion Time of Condition A not met.	B.1 Initiate action to restore RHR shutdown cooling subsystem(s) to OPERABLE status.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.4.8.1 Verify each RHR shutdown 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.	In accordance with the Surveillance Frequency Control Program

(continued)



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO

AMENDMENT NO. 236 TO FACILITY OPERATING LICENSE NO. NPF-62

AMENDMENT NO. 274 TO RENEWED FACILITY OPERATING LICENSE NO. DPR-19

AMENDMENT NO. 267 TO RENEWED FACILITY OPERATING LICENSE NO. DPR-25

AMENDMENT NO. 340 TO RENEWED FACILITY OPERATING LICENSE NO. DPR-59

AMENDMENT NO. 248 TO RENEWED FACILITY OPERATING LICENSE NO. NPF-11

AMENDMENT NO. 234 TO RENEWED FACILITY OPERATING LICENSE NO. NPF-18

AMENDMENT NO. 185 TO RENEWED FACILITY OPERATING LICENSE NO. NPF-69

AMENDMENT NO. 337 TO SUBSEQUENT RENEWED FACILITY
OPERATING LICENSE NO. DPR-44

AMENDMENT NO. 340 TO SUBSEQUENT RENEWED FACILITY
OPERATING LICENSE NO. DPR-56

AMENDMENT NO. 286 TO RENEWED FACILITY OPERATING LICENSE NO. DPR-29

AND AMENDMENT NO. 282 TO RENEWED FACILITY OPERATING LICENSE NO. DPR-30

EXELON GENERATION COMPANY, LLC

CLINTON POWER STATION, UNIT NO. 1

DRESDEN NUCLEAR POWER STATION, UNITS 2 AND 3

JAMES A. FITZPATRICK NUCLEAR POWER PLANT

LASALLE COUNTY STATION, UNITS 1 AND 2

NINE MILE POINT NUCLEAR STATION, UNIT 2

PEACH BOTTOM ATOMIC POWER STATION, UNITS 2 AND 3

QUAD CITIES NUCLEAR POWER STATION, UNITS 1 AND 2

DOCKET NOS. 50-461, 50-237, 50-249, 50-333, 50-373, 50-374,

50-410, 50-277, 50-278, 50-254, AND 50-265

1.0 INTRODUCTION

By application dated April 13, 2020 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML20104C104), as supplemented by letter dated January 29, 2021 (ADAMS Accession No. ML21029A306), Exelon Generation Company, LLC (Exelon, the licensee) submitted a license amendment request for Clinton Power Station (Clinton), Unit No. 1; Dresden Nuclear Power Station (Dresden), Units 2 and 3; James A. FitzPatrick Nuclear Power Plant (FitzPatrick); LaSalle County Station (LaSalle), Units 1 and 2; Nine Mile Point Nuclear Station, Unit 2 (NMP-2); Peach Bottom Atomic Power Station (Peach Bottom), Units 2 and 3; and Quad Cities Nuclear Power Station (Quad Cities), Units 1 and 2 (collectively, the facilities). The amendments would revise the technical specifications (TSs) for each facility to change the required actions for inoperable residual heat removal (RHR) shutdown cooling subsystems.

The proposed changes are based on Technical Specifications Task Force (TSTF) traveler TSTF-566, Revision 0, "Revise Actions for Inoperable RHR Shutdown Cooling Subsystems" (ADAMS Accession No. ML18019B187). The U.S. Nuclear Regulatory Commission (NRC, the Commission) issued a final safety evaluation (SE) approving TSTF-566, Revision 0, on February 21, 2019 (ADAMS Package Accession No. ML19028A288).

The January 29, 2021, supplemental letter provided additional information that clarified the application, did not expand the scope of the application as originally noticed, and did not change the NRC staff's original proposed no significant hazards consideration determination as published in the Federal Register on May 19, 2020 (85 FR 29985).

2.0 REGULATORY EVALUATION

2.1 Description of Residual Heat Removal Shutdown Cooling System

Irradiated fuel in the shutdown reactor core generates heat during the decay of fission products and increases the temperature of the reactor coolant. This decay heat must be removed to reduce the temperature of the reactor coolant to less than or equal to 200 or 212 degrees Fahrenheit (°F), depending on the plant. This decay heat is removed by the RHR shutdown cooling system in preparation for performing refueling or maintenance operations, or for keeping the reactor in the hot shutdown condition or cold shutdown condition.

There are two to four redundant, manually controlled shutdown cooling subsystems of the RHR system that provide decay heat removal for each reactor unit. Each of the shutdown cooling subsystems of the RHR system can provide the required decay heat removal. Each RHR shutdown cooling subsystem consists of one or two motor-driven pumps, a heat exchanger, and associated piping and valves. The RHR heat exchangers transfer heat to the associated service water system. Some piping and heat exchangers that are passive components may be common to more than one subsystem.

2.2 Description of Proposed Changes

For each facility, there are two separate TSs for the RHR shutdown cooling system—one for hot shutdown (Table 1) and one for cold shutdown (Table 2). Exelon proposes to change the required actions for inoperable required RHR shutdown cooling subsystems in both TSs. The proposed changes are based on TSTF-566, Revision 0.

2.2.1 Residual Heat Removal Shutdown Cooling System – Hot Shutdown

The hot shutdown TSs for the RHR shutdown cooling system for each facility are listed in Table 1 below. The table provides the TS number, limiting condition for operation (LCO), and applicability.

Table 1: TSs for RHR Shutdown Cooling System – Hot Shutdown

Facility	TSs for RHR Shutdown Cooling System – Hot Shutdown	
Clinton	TS 3.4.9:	Residual Heat Removal (RHR) Shutdown Cooling System—Hot Shutdown
	LCO 3.4.9:	Two RHR shutdown cooling subsystems shall be OPERABLE, and, with no recirculation pump in operation, at least one RHR shutdown cooling subsystem shall be in operation.
	Applicability:	Mode 3 with reactor steam dome pressure less than the RHR cut in permissive pressure.
Dresden	TS 3.4.7:	Shutdown Cooling (SDC) System—Hot Shutdown
	LCO 3.4.7:	Two SDC subsystems shall be OPERABLE, and, with no recirculation pump in operation, at least one SDC subsystem shall be in operation.
	Applicability:	MODE 3, with reactor vessel coolant temperature less than the SDC cut-in permissive temperature.
FitzPatrick	TS 3.4.7:	Residual Heat Removal (RHR) Shutdown Cooling System-Hot Shutdown
	LCO 3.4.7:	Two RHR shutdown cooling subsystems shall be OPERABLE.
	Applicability:	MODE 3, with reactor steam dome pressure less than the RHR cut in permissive pressure.

Facility	TSs for RHR Shutdown Cooling System – Hot Shutdown	
LaSalle	TS 3.4.9:	Residual Heat Removal (RHR) Shutdown Cooling System–Hot Shutdown
	LCO 3.4.9:	Two RHR shutdown cooling subsystems shall be OPERABLE, and, with no recirculation pump in operation, at least one RHR shutdown cooling subsystem shall be in operation.
	Applicability:	MODE 3 with reactor vessel pressure less than the RHR cut-in permissive pressure.
NMP-2	TS 3.4.9:	Residual Heat Removal (RHR) Shutdown Cooling System—Hot Shutdown
	LCO 3.4.9:	Two RHR shutdown cooling subsystems shall be OPERABLE, and, with no recirculation pump in operation, at least one RHR shutdown cooling subsystem shall be in operation.
	Applicability:	MODE 3 with reactor steam dome pressure less than the RHR cut-in permissive pressure.
Peach Bottom	TS 3.4.7:	Residual Heat Removal (RHR) Shutdown Cooling System–Hot Shutdown
	LCO 3.4.7:	Two RHR shutdown cooling subsystems shall be OPERABLE, and, with no recirculation pump in operation, at least one RHR shutdown cooling subsystem shall be in operation.
	Applicability:	MODE 3, with reactor steam dome pressure less than the RHR shutdown cooling isolation pressure.
Quad Cities	TS 3.4.7:	Residual Heat Removal (RHR) Shutdown Cooling System–Hot Shutdown
	LCO 3.4.7:	Two RHR shutdown cooling subsystems shall be OPERABLE.
	Applicability:	MODE 3, with reactor steam dome pressure less than the RHR cut-in permissive pressure.

For the TSs listed in Table 1, when the LCO is applicable and one or two required RHR shutdown cooling subsystems are inoperable (Condition A), operators are currently required to:

- (a) initiate action to restore the required RHR shutdown cooling subsystem(s) to operable status (Required Action A.1) immediately;
- (b) verify an alternate method of decay heat removal is available for each inoperable required RHR shutdown cooling subsystem (Required Action A.2) within 1 hour; and
- (c) be in Mode 4 (Required Action A.3 for Clinton, Dresden, FitzPatrick, LaSalle, NMP-2, and Peach Bottom; Required Action A.5 for Quad Cities) within 24 hours.

When in Condition A, if both RHR shutdown cooling subsystems are inoperable, the Quad Cities TS 3.4.7 also requires operators to:

- (a) verify reactor coolant circulation by an alternative method (Required Action A.3) within 1 hour and once per 12 hours thereafter and
- (b) monitor reactor coolant temperature and pressure (Required Action A.4) once per hour.

For the TSs listed in Table 1, the licensee proposed a new Condition B for when the required action and associated completion time (CT) of Condition A are not met. The licensee proposed to move Required Action A.1 to the new Condition B (as Required Action B.1). The licensee proposed to delete Required Action A.3 for Clinton, Dresden, FitzPatrick, LaSalle, NMP-2, and Peach Bottom and Required Action A.5 for Quad Cities. The licensee also proposed to add a recurring CT to current Required Action A.2 of “once per 24 hours thereafter.”

The proposed changes would renumber the current Required Action A.2 as A.1, since current Required Action A.1 would be removed from Condition A. The current Required Actions A.3 and A.4 in the Quad Cities TS 3.4.7 would also be renumbered as A.2 and A.3, respectively. The TSs listed in Table 1 for Clinton, Dresden, LaSalle, NMP-2, and Peach Bottom currently include a Condition B with Required Actions B.1, B.2, and B.3, which the licensee proposes to renumber as Condition C with Required Actions C.1, C.2, and C.3, respectively.

2.2.2 Residual Heat Removal Shutdown Cooling System – Cold Shutdown

The cold shutdown TSs for the RHR shutdown cooling system for each facility are listed in Table 2 below. The table provides the TS number, LCO, and applicability.

Table 2: TSs for RHR Shutdown Cooling System – Cold Shutdown

Facility	TSs for RHR Shutdown Cooling System – Cold Shutdown
Clinton	<p>TS 3.4.10: Residual Heat Removal (RHR) Shutdown Cooling System—Cold Shutdown</p> <p>LCO 3.4.10: Two RHR shutdown cooling subsystems shall be OPERABLE, and, with no recirculation pump in operation, at least one RHR shutdown cooling subsystem shall be in operation.</p> <p>Applicability: MODE 4.</p>
Dresden	<p>TS 3.4.8: Shutdown Cooling (SDC) System – Cold Shutdown</p> <p>LCO 3.4.8: Two SDC subsystems shall be OPERABLE, and, with no recirculation pump in operation, at least one SDC subsystem shall be in operation.</p> <p>Applicability: MODE 4.</p>

Facility	TSs for RHR Shutdown Cooling System – Cold Shutdown
FitzPatrick	<p>TS 3.4.8: Residual Heat Removal (RHR) Shutdown Cooling System – Cold Shutdown</p> <p>LCO 3.4.8: Two RHR shutdown cooling subsystems shall be OPERABLE.</p> <p>Applicability: MODE 4.</p>
LaSalle	<p>TS 3.4.10: Residual Heat Removal (RHR) Shutdown Cooling System – Cold Shutdown</p> <p>LCO 3.4.10: Two RHR shutdown cooling subsystems shall be OPERABLE, and, with no recirculation pump in operation, at least one RHR shutdown cooling subsystem shall be in operation.</p> <p>Applicability: MODE 4.</p>
NMP-2	<p>TS 3.4.10: Residual Heat Removal (RHR) Shutdown Cooling System— Cold Shutdown</p> <p>LCO 3.4.10: Two RHR shutdown cooling subsystems shall be OPERABLE, and, with no recirculation pump in operation, at least one RHR shutdown cooling subsystem shall be in operation.</p> <p>Applicability: MODE 4.</p>
Peach Bottom	<p>TS 3.4.8: Residual Heat Removal (RHR) Shutdown Cooling System— Cold Shutdown</p> <p>LCO 3.4.8: Two RHR shutdown cooling subsystems shall be OPERABLE, and, with no recirculation pump in operation, at least one RHR shutdown cooling subsystem shall be in operation.</p> <p>Applicability: MODE 4.</p>
Quad Cities	<p>TS 3.4.8: Residual Heat Removal (RHR) Shutdown Cooling System – Cold Shutdown</p> <p>LCO 3.4.8: Two RHR shutdown cooling subsystems shall be OPERABLE.</p> <p>Applicability: MODE 4.</p>

For the TSs listed in Table 2, when the LCO is applicable and one or two required RHR shutdown cooling subsystems are inoperable (Condition A), operators are currently required to verify an alternate method of decay heat removal is available for each inoperable required RHR shutdown cooling subsystem (Required Action A.1) within 1 hour and once per 24 hours thereafter. When in Condition A, if both RHR shutdown cooling subsystems are inoperable, the Quad Cities TS 3.4.8 also requires operators to:

- (a) verify reactor coolant circulating by an alternative method (Required Action A.2) within 1 hour and once per 12 hours thereafter and
- (b) monitor reactor coolant temperature and pressure (Required Action A.3) once per hour.

For the TSs listed in Table 2, the licensee proposed a new Condition B for when the required action and associated CT of Condition A are not met, which has a required action (new Required Action B.1) to initiate action to restore required RHR shutdown cooling subsystems(s) to operable status immediately.

The TSs listed in Table 2 for Clinton, Dresden, LaSalle, NMP-2, and Peach Bottom currently include a Condition B with Required Actions B.1 and B.2, which the licensee proposes to renumber as Condition C with Required Actions C.1 and C.2, respectively.

2.2.3 Variations from TSTF-566

The Dresden, FitzPatrick, Peach Bottom, and Quad Cities TSs listed in Tables 1 and 2 use different numbering than the standard technical specifications (STS) on which TSTF-566 was based. The Dresden TSs use the term "Shutdown Cooling (SDC)" instead of "Residual Heat Removal (RHR) Shutdown Cooling." The subject Dresden and Peach Bottom TSs refer to the "required" SDC subsystems and "required" RHR shutdown cooling subsystems, respectively, to clarify that the remedial actions only apply when the LCO is not met since these facilities have more subsystems than required to meet the LCO. The FitzPatrick and Quad Cities TSs listed in Tables 1 and 2 do not currently include a Condition B. These differences are editorial and do not affect the applicability of TSTF-566 to the proposed LAR with respect to these facilities.

Condition A for both Quad Cities TSs 3.4.7 and 3.4.8 includes two additional required actions that are not included in the STS. These differences do not affect the applicability of TSTF-566 to the proposed LAR with respect to Quad Cities, but are evaluated in Sections 3.1.3 and 3.2.2 of this SE, respectively.

2.3 Regulatory Requirements and Guidance

The regulatory requirements related to the content of TSs are provided in Section 50.36, "Technical specifications," of Title 10 of the *Code of Federal Regulations* (10 CFR). Section 50.36(a)(1) of 10 CFR requires each applicant for a license authorizing operation of a utilization facility to include in the application proposed TSs. In addition, 10 CFR 50.36(a)(1) states, in part: "A summary statement of the bases or reasons for such specifications, other than those covering administrative controls, shall also be included in the application, but shall not become part of the technical specifications."

The regulation at 10 CFR 50.36(b) states, in part:

Each license authorizing operation of a ... utilization facility ... will include technical specifications. The technical specifications will be derived from the analyses and evaluation included in the safety analysis report, and amendments thereto, submitted pursuant to [10 CFR] 50.34 ["Contents of applications; technical information"]. The Commission may include such additional technical specifications as the Commission finds appropriate.

Pursuant to 10 CFR 50.36, TSs for operating reactors are required, in part, to include LCOs. In accordance with 10 CFR 50.36(c)(2), LCOs are the lowest functional capability or performance

levels of equipment required for safe operation of the facility. When an LCO is not met, the licensee shall shut down the reactor or follow any remedial action permitted by the TSs until the LCO can be met.

The regulation at 10 CFR 50.40, "Common standards," states, in part:

In determining that [an] operating license ... will be issued to an applicant, the Commission will be guided by the following considerations:

(a) ... the processes to be performed, the operating procedures, the facility and equipment, the use of the facility, and other technical specifications, or the proposals, in regard to any of the foregoing collectively provide reasonable assurance that the applicant will comply with the regulations in this chapter, including the regulations in part 20 of this chapter, and that the health and safety of the public will not be endangered.

The NRC staff's guidance for the review of TSs is in Section 16.0, Revision 3, "Technical Specifications" (ADAMS Accession No. ML100351425), of NUREG-0800, "Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants: LWR [Light-Water Reactor] Edition." As described therein, as part of the regulatory standardization effort, the NRC staff has prepared improved STS for each of the LWR nuclear designs. Accordingly, the NRC staff's review includes consideration of whether the proposed changes are consistent with the applicable reference STS (i.e., the current STS), as modified by NRC-approved travelers. The current STS and associated bases for boiling-water reactors (BWRs) are:

1. NUREG-1433, Revision 4.0, "Standard Technical Specifications: General Electric BWR/4 Plants," Volume 1, "Specifications," and Volume 2, "Bases," April 2012 (ADAMS Accession Nos. ML12104A192 and ML12104A193, respectively); and
2. NUREG-1434, Revision 4.0, "Standard Technical Specifications: General Electric BWR/6 Plants," Volume 1, "Specifications," and Volume 2, "Bases," April 2012 (ADAMS Accession Nos. ML12104A195 and ML12104A196, respectively).

The TSs for Dresden, Peach Bottom, and Quad Cities are based on NUREG-1433. The TSs for Clinton are based on NUREG-1434. The TSs for FitzPatrick, LaSalle, and NMP-2 are based on both NUREG-1433 and NUREG-1434 because these facilities include both General Electric BWR/4 and BWR/6 design elements.

3.0 TECHNICAL EVALUATION

3.1 Proposed Changes to the Technical Specifications Listed in Table 1

For each facility, the licensee proposed to modify the hot shutdown TSs for the RHR shutdown cooling system (see Table 1). The technical evaluation of the proposed changes to these TSs is provided in this section.

3.1.1 Evaluation of Changes to Condition A

For each TS listed in Table 1, the current Required Action A.2 requires verification that an alternate method of decay heat removal is available for each inoperable required RHR shutdown cooling subsystem within 1 hour. The licensee proposed to add a recurring CT to

Required Action A.2 of "once per 24 hours thereafter." The NRC staff finds that this change is acceptable, since it requires verification of alternate methods of decay heat removal every 24 hours and provides assurance of continued heat removal capability.

For each TS listed in Table 1, the licensee also proposed to delete current Required Action A.3 (Required Action A.5 for Quad Cities), which requires the plant to be in Mode 4 within 24 hours when one or two required RHR shutdown cooling subsystems are inoperable. Current Required Action A.3 (Required Action A.5 for Quad Cities) requires operators to reduce the reactor coolant system temperature to the point where Mode 4 is entered, due to the potentially reduced reliability of the alternate methods of decay heat removal. However, if there are no operable RHR shutdown cooling subsystems and the plant is in a period of high decay heat load, it may not be possible to reduce the reactor coolant system temperature to the Mode 4 entry condition (i.e., less than 200 °F or 212 °F, depending on the plant) within the CT. Additionally, in a typical BWR design, the RHR shutdown cooling system has a heat rejection capability many times greater than alternate methods available. Therefore, for periods in which there is high decay heat load, the BWR design does not include any system that can satisfy Required Action A.3 (Required Action A.5 for Quad Cities). The NRC staff finds that the deletion of current Required Action A.3 (Required Action A.5 for Quad Cities) is acceptable because, when an LCO listed in Table 1 is applicable, a remaining required action requires verification that an alternate method of decay heat removal is available to transfer fission product decay heat and other residual heat from the reactor core at a rate such that specified acceptable fuel design limits and the design conditions of the reactor coolant pressure boundary are not exceeded.

For each TS listed in Table 1, the current Required Action A.2 would be renumbered as A.1, since Required Action A.1 would be removed from Condition A. Additionally, the current Required Actions A.3 and A.4 in the Quad Cities TS 3.4.7 would be renumbered as A.2 and A.3, respectively. The NRC staff finds that these changes are acceptable since they provide the correct number sequence.

3.1.2 Evaluation of New Condition B

For each TS listed in Table 1, the licensee proposed a new Condition B for when the required action and associated CT of Condition A is not met. Required Action B.1 for the new Condition B is moved from the current Required Action A.1 and requires operators to initiate action to restore required RHR shutdown cooling subsystem(s) to operable status immediately. The NRC staff finds that relocating current Required Action A.1 to new Required Action B.1 is acceptable because other ways of removing decay heat are available, such as natural circulation, the spent fuel pool cooling system, the reactor water cleanup system, and an inoperable, but functional, RHR shutdown cooling subsystem.

If an alternate method cannot be established (Condition A), new Condition B requires the licensee to immediately initiate action to restore the inoperable required RHR shutdown cooling subsystem(s) to operable status. Section 1.3 of the TSs for each facility states that when "immediately" is used as a CT, "the Required Action should be pursued without delay and in a controlled manner." New Required Action B.1 continues to apply until the inoperable required RHR shutdown cooling subsystems are restored to operable status, an alternate decay heat removal method is established, or the specification is exited.

The NRC staff finds that this change is acceptable because new Condition B, with its Required Action B.1, provides an appropriate terminal action for when an alternate method of decay heat removal cannot be established within the CT. In addition, new Required Action B.1 will restore

redundant decay heat removal paths and the immediate CT reflects the importance of maintaining the availability of two paths for heat removal.

3.1.3 Additional Evaluation of New Condition B for Quad Cities

When in Condition A, if both RHR shutdown cooling subsystems are inoperable, the Quad Cities TS 3.4.7 also requires operators to:

- (a) verify reactor coolant circulation by an alternative method (current Required Action A.3) within 1 hour and once per 12 hours thereafter and
- (b) monitor reactor coolant temperature and pressure (current Required Action A.4) once per hour.

The bases for Quad Cities TS 3.4.7 state, in part, that the alternative method for reactor coolant circulation will provide assurance of continued temperature monitoring capability and it may be satisfied by placing a recirculation pump in service. The periodic monitoring of the reactor coolant temperature and pressure provides assurance that this alternative method is functioning properly.

For Quad Cities TS 3.4.7, the new Condition B, with its Required Action B.1, would apply when the required action and associated CT of Condition A is not met, including current Required Actions A.3 and A.4. Thus, if an alternative method of reactor coolant circulation could not be established or the reactor coolant temperature and pressure could not be monitored, then the new Required Action B.1 would require operators to immediately initiate action to restore the inoperable RHR shutdown cooling subsystem(s) to operable status.

In addition to the finding in Section 3.1.2 of this SE, the NRC staff finds that this change for Quad Cities is acceptable because the new Condition B, with its Required Action B.1, provides an appropriate terminal action for when an alternate method for reactor coolant circulation cannot be established within the CT. Restoration of an RHR shutdown cooling subsystem would provide adequate reactor coolant circulation to assure continued temperature monitoring capability.

3.1.4 Evaluation of Changes to Existing Condition B

The TSs listed in Table 1 for Clinton, Dresden, LaSalle, NMP-2, and Peach Bottom currently include a Condition B with Required Actions B.1, B.2, and B.3, which the licensee proposed to renumber as Condition C with Required Actions C.1, C.2, and C.3, respectively. The NRC staff finds that this change is acceptable since it provides the correct number sequence.

3.1.5 Conclusion Regarding Proposed Changes to the Technical Specifications Listed in Table 1

The NRC staff concludes that the proposed changes to the TSs listed in Table 1 are acceptable since the TSs will continue to meet the requirements of 10 CFR 50.40(a) because they provide reasonable assurance that the health and safety of the public will not be endangered.

3.2 Proposed Changes to the Technical Specifications Listed in Table 2

For each facility, the licensee proposed to modify the cold shutdown TSs for the RHR shutdown cooling system (see Table 2). The technical evaluation of the proposed changes to these TSs is provided in this section.

3.2.1 Evaluation of New Condition B

For each TS listed in Table 2, the licensee proposed a new Condition B for when the required action and associated CT of Condition A is not met. Required Action B.1 for the new Condition B requires operators to initiate action to restore required RHR shutdown cooling subsystem(s) to operable status immediately.

If an alternate method cannot be established (Condition A), new Condition B requires the licensee to immediately initiate action to restore the inoperable required RHR shutdown cooling subsystem(s) to operable status. Section 1.3 of the TSs for each facility states that when "immediately" is used as a CT, "the Required Action should be pursued without delay and in a controlled manner." New Required Action B.1 continues to apply until the inoperable required RHR shutdown cooling subsystems are restored to operable status, an alternate decay heat removal method is established, or the specification is exited.

The NRC staff finds that this change is acceptable because new Condition B, with its Required Action B.1, provides an appropriate terminal action for when an alternate method cannot be established within the CT. In addition, new Required Action B.1 will restore redundant decay heat removal paths and the immediate CT reflects the importance of maintaining the availability of two paths for heat removal.

3.2.2 Additional Evaluation of New Condition B for Quad Cities

When in Condition A, if both RHR shutdown cooling subsystems are inoperable, the Quad Cities TS 3.4.8 also requires operators to:

- (a) verify reactor coolant circulating by an alternative method (Required Action A.2) within 1 hour and once per 12 hours thereafter and
- (b) monitor reactor coolant temperature and pressure (Required Action A.3) once per hour.

The bases for Quad Cities TS 3.4.8 states, in part, that the alternative method for reactor coolant circulation will provide assurance of continued temperature monitoring capability and it may be satisfied by placing a recirculation pump in service. The periodic monitoring of the reactor coolant temperature and pressure provides assurance that this alternative method is functioning properly.

For Quad Cities TS 3.4.8, the new Condition B, with its Required Action B.1, would apply when the required action and associated CT of Condition A is not met, including Required Actions A.2 and A.3. Thus, if an alternative method of reactor coolant circulation could not be established or the reactor coolant temperature and pressure could not be monitored, then the new Required Action B.1 would require operators to immediately initiate action to restore the inoperable RHR shutdown cooling subsystem(s) to operable status.

In addition to the finding in Section 3.2.1 of this SE, the NRC staff finds that this change for Quad Cities is acceptable because the new Condition B, with its Required Action B.1, provides

an appropriate terminal action for when an alternate method for reactor coolant circulation cannot be established within the CT. Restoration of an RHR shutdown cooling subsystem would provide adequate reactor coolant circulation to assure continued temperature monitoring capability.

3.2.3 Evaluation of Changes to Existing Condition B

The TSs listed in Table 2 for Clinton, Dresden, LaSalle, NMP-2, and Peach Bottom currently include a Condition B with Required Actions B.1 and B.2, which the licensee proposed to renumber as Condition C with Required Actions C.1 and C.2, respectively. The NRC staff finds that this change is acceptable since it provides the correct number sequence.

3.2.4 Conclusion Regarding Proposed Changes to the Technical Specifications Listed in Table 2

The NRC staff concludes that the proposed changes to the TSs listed in Table 2 are acceptable since the TSs will continue to meet the requirements of 10 CFR 50.40(a) because they provide reasonable assurance that the health and safety of the public will not be endangered.

4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Illinois, Pennsylvania, and New York State officials were notified of the proposed issuance of the amendments on January 21, 2021. The State officials had no comments.

5.0 ENVIRONMENTAL CONSIDERATION

The amendments change requirements with respect to the installation or use of facility components located within the restricted area as defined in 10 CFR Part 20. The NRC staff has determined that the amendments involve 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 amendments involve no significant hazards consideration, and there has been no public comment on such finding (85 FR 29985; May 19, 2020). Accordingly, the amendments meet 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 amendments.

6.0 CONCLUSION

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

Principal Contributor: Blake Purnell, NRR

Date of Issuance: April 1, 2021

SUBJECT: CLINTON POWER STATION, UNIT NO. 1; DRESDEN NUCLEAR POWER STATION, UNITS 2 AND 3; JAMES A. FITZPATRICK NUCLEAR POWER PLANT; LASALLE COUNTY STATION, UNITS 1 AND 2; NINE MILE POINT NUCLEAR STATION, UNIT 2; PEACH BOTTOM ATOMIC POWER STATION, UNITS 2 AND 3; AND QUAD CITIES NUCLEAR POWER STATION, UNITS 1 AND 2 – ISSUANCE OF AMENDMENTS TO ADOPT TECHNICAL SPECIFICATIONS TASK FORCE TRAVELER TSTF-566 (EPID L-2020-LLA-0077) DATED APRIL 1, 2021

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