



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

February 4, 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: DRESDEN NUCLEAR POWER STATION, UNITS 2 AND 3; LASALLE COUNTY STATION, UNITS 1 AND 2; LIMERICK GENERATING 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-568 (EPID L-2020-LLA-0096)

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 application dated April 30, 2020 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML20121A274), as supplemented by letter dated September 3, 2020 (ADAMS Accession No. ML20247J525):

1. Amendment No. 273 to Renewed Facility Operating License No. DPR-19 and Amendment No. 266 to Renewed Facility Operating License No. DPR-25 for Dresden Nuclear Power Station, Units 2 and 3 (Dresden), respectively;
2. Amendment No. 247 to Renewed Facility Operating License No. NPF-11 and Amendment No. 233 to Renewed Facility Operating License No. NPF-18 for LaSalle County Station, Units 1 and 2 (LaSalle), respectively;
3. Amendment No. 251 to Renewed Facility Operating License No. NPF-39 and Amendment No. 213 to Renewed Facility Operating License No. NPF-85 for Limerick Generating Station, Units 1 and 2 (Limerick), respectively;
4. Amendment No. 184 to Renewed Facility Operating License No. NPF-69 for Nine Mile Point Nuclear Station, Unit 2 (NMP-2);
5. Amendment No. 336 to Subsequent Renewed Facility Operating License No. DPR-44 and Amendment No. 339 to Subsequent Renewed Facility Operating License No. DPR-56 for Peach Bottom Atomic Power Station, Units 2 and 3 (Peach Bottom), respectively; and
6. Amendment No. 285 to Renewed Facility Operating License No. DPR-29 and Amendment No. 281 to Renewed Facility Operating License No. DPR-30 for Quad Cities Nuclear Power Station, Units 1 and 2 (Quad Cities), respectively.

The amendments revise the following technical specifications (TSs):

- Dresden and Quad Cities TS 3.6.2.5, "Drywell-to-Suppression Chamber Differential Pressure";
- Dresden and Quad Cities TS 3.6.3.1, "Primary Containment Oxygen Concentration";
- LaSalle, NMP-2, and Peach Bottom TS 3.6.3.2, "Primary Containment Oxygen Concentration"; and
- Limerick TS 3/4.6.6.3, "Drywell and Suppression Chamber Oxygen Concentration."

The changes are based, in part, on Technical Specifications Task Force (TSTF) Traveler TSTF-568, Revision 2, "Revise Applicability of BWR/4 [Boiling-Water Reactor/Type 4] TS 3.6.2.5 and TS 3.6.3.2" (ADAMS Accession No. ML19141A122).

A copy of the NRC staff's Safety Evaluation is also enclosed. The Notice of Issuance will be included in the Commission's *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. 50-237, 50-249, 50-373, 50-374,
50-352, 50-353, 50-410, 50-277, 50-278,
50-254, and 50-265

Enclosures:

1. Amendment No. 273 to DPR-19
2. Amendment No. 266 to DPR-25
3. Amendment No. 247 to NPF-11
4. Amendment No. 233 to NPF-18
5. Amendment No. 251 to NPF-39
6. Amendment No. 213 to NPF-85
7. Amendment No. 184 to NPF-69
8. Amendment No. 336 to DPR-44
9. Amendment No. 339 to DPR-56
10. Amendment No. 285 to DPR-29
11. Amendment No. 281 to DPR-30
12. Safety Evaluation

cc: Listserv



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. 273
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 30, 2020, as supplemented by letter dated September 3, 2020, 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. 273, 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: February 4, 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. 266
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 30, 2020, as supplemented by letter dated September 3, 2020, 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. 266, 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: February 4, 2021

ATTACHMENT TO LICENSE AMENDMENT NOS. 273 AND 266

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

3.6.2.5-1

3.6.3.1-1

Insert

License DPR-19

Page 3

License DPR-25

Page 4

TSs

3.6.2.5-1

3.6.3.1-1

- (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. 273, 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. 266, 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

3.6 CONTAINMENT SYSTEMS

3.6.2.5 Drywell-to-Suppression Chamber Differential Pressure

LCO 3.6.2.5 The drywell pressure shall be maintained ≥ 1.0 psid above the pressure of the suppression chamber.

APPLICABILITY: MODE 1 with THERMAL POWER > 15% RTP.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Drywell-to-suppression chamber differential pressure not within limit.	A.1 -----NOTE----- LCO 3.0.4.c is applicable ----- Restore differential pressure to within limit.	72 hours
B. Required Action and associated Completion Time not met.	B.1 Reduce THERMAL POWER to $\leq 15\%$ RTP.	12 hours

3.6 CONTAINMENT SYSTEMS

3.6.3.1 Primary Containment Oxygen Concentration

LCO 3.6.3.1 The primary containment oxygen concentration shall be < 4.0 volume percent.

APPLICABILITY: MODES 1 and 2.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Primary containment oxygen concentration not within limit.	A.1 -----NOTE----- LCO 3.0.4.c is applicable ----- Restore oxygen concentration to within limit.	72 hours
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 3.	12 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.6.3.1.1 Verify primary containment oxygen concentration is within limits.	In accordance with the Surveillance Frequency Control Program



UNITED STATES
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EXELON GENERATION COMPANY, LLC

DOCKET NO. 50-373

LASALLE COUNTY STATION, UNIT 1

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 247
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 30, 2020, as supplemented by letter dated September 3, 2020, 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. 247, 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 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: February 4, 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. 233
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 30, 2020, as supplemented by letter dated September 3, 2020, 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. 233, 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 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: February 4, 2021

ATTACHMENT TO LICENSE AMENDMENT NOS. 247 AND 233

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
3.6.3.2-1

Insert

License NPF-11
Page 3

License NPF-18
Page 3

TSs
3.6.3.2-1

(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 Plevels not in excess of full power (3546 megawatts thermal).

Am. 247
02/04/21

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 247, 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. 233
02/04/21

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 233, 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.

3.6 CONTAINMENT SYSTEMS

3.6.3.2 Primary Containment Oxygen Concentration

LCO 3.6.3.2 The primary containment oxygen concentration shall be < 4.0 volume percent.

APPLICABILITY: MODES 1 and 2.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Primary containment oxygen concentration not within limit.	A.1 -----NOTE----- LCO 3.0.4.c is applicable ----- Restore oxygen concentration to within limit.	72 hours
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 3.	12 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.6.3.2.1 Verify primary containment oxygen concentration is within limits.	In accordance with the Surveillance Frequency Control Program



UNITED STATES
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WASHINGTON, D.C. 20555-0001

EXELON GENERATION COMPANY, LLC

DOCKET NO. 50-352

LIMERICK GENERATING STATION, UNIT 1

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 251
Renewed License No. NPF-39

1. The U.S. Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Exelon Generation Company, LLC dated April 30, 2020, as supplemented by letter dated September 3, 2020, 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-39 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A and the Environmental Protection Plan contained in Appendix B, as revised through Amendment No. 251, are hereby incorporated into this renewed 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 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: February 4, 2021

ATTACHMENT TO LICENSE AMENDMENT NO. 251
RENEWED FACILITY OPERATING LICENSE NO. NPF-39
LIMERICK GENERATING STATION, UNIT 1
DOCKET NO. 50-352

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-39
Page 3

TSs
3/4 6-59

Insert

License NPF-39
Page 3

TSs
3/4 6-59

- (2) Pursuant to the Act and 10 CFR Part 70, to receive, possess and to 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, 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) 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, and to receive and possess, but not separate, such source, byproduct, and special nuclear materials as contained in the fuel assemblies and fuel channels from the Shoreham Nuclear Power Station.

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 (except as exempted from compliance in Section 2.D. below) 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 3515 megawatts thermal (100% rated power) in accordance with the conditions specified herein and in Attachment 1 to this license. The items identified in Attachment 1 to this renewed license shall be completed as specified. Attachment 1 is hereby incorporated into this renewed license.

(2) Technical Specifications

The Technical Specifications contained in Appendix A and the Environmental Protection Plan contained in Appendix B, as revised through Amendment No. 251, are hereby incorporated into this renewed license. Exelon Generation Company shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

CONTAINMENT SYSTEMS

DRYWELL AND SUPPRESSION CHAMBER OXYGEN CONCENTRATION

LIMITING CONDITION FOR OPERATION

3.6.6.3 The drywell and suppression chamber atmosphere oxygen concentration shall be less than 4% by volume.

APPLICABILITY: OPERATIONAL CONDITIONS 1* and 2.

ACTION:

With the drywell and/or suppression chamber oxygen concentration exceeding the limit, restore the oxygen concentration to within the limit within 72 hours or be in at least HOT SHUTDOWN within the next 12 hours. The provision of Specification 3.0.4.c is applicable.

SURVEILLANCE REQUIREMENTS

4.6.6.3 The drywell and suppression chamber oxygen concentration shall be verified to be within the limit in accordance with the Surveillance Frequency Control Program.

*See Special Test Exception 3.10.5.



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

EXELON GENERATION COMPANY, LLC

DOCKET NO. 50-353

LIMERICK GENERATING STATION, UNIT 2

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 213
Renewed License No. NPF-85

1. The U.S. Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Exelon Generation Company, LLC dated April 30, 2020, as supplemented by letter dated September 3, 2020, 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-85 is hereby amended to read as follows:

- (2) Technical Specifications

- The Technical Specifications contained in Appendix A and the Environmental Protection Plan contained in Appendix B, as revised through Amendment No. 213, are hereby incorporated into this renewed 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 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: February 4, 2021

ATTACHMENT TO LICENSE AMENDMENT NO. 213
RENEWED FACILITY OPERATING LICENSE NO. NPF-85
LIMERICK GENERATING STATION, UNIT 2
DOCKET NO. 50-353

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-85
Page 3

TSs
3/4 6-59

Insert

License NPF-85
Page 3

TSs
3/4 6-59

- (2) Pursuant to the Act and 10 CFR Part 70, to receive, possess and to 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, 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) 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, and to receive and possess, but not separate, such source, byproduct, and special nuclear materials as contained in the fuel assemblies and fuel channels from the Shoreham Nuclear Power Station.

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 (except as exempted from compliance in Section 2.D. below) 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 of 3515 megawatts thermal (100 percent rated power) in accordance with the conditions specified herein.

(2) Technical Specifications

The Technical Specifications contained in Appendix A and the Environmental Protection Plan contained in Appendix B, as revised through Amendment No. 213, are hereby incorporated into this renewed license. Exelon Generation Company shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

CONTAINMENT SYSTEMS

DRYWELL AND SUPPRESSION CHAMBER OXYGEN CONCENTRATION

LIMITING CONDITION FOR OPERATION

3.6.6.3 The drywell and suppression chamber atmosphere oxygen concentration shall be less than 4% by volume.

APPLICABILITY: OPERATIONAL CONDITIONS 1* and 2.

ACTION:

With the drywell and/or suppression chamber oxygen concentration exceeding the limit, restore the oxygen concentration to within the limit within 72 hours or be in at least HOT SHUTDOWN within the next 12 hours. The provision of Specification 3.0.4.c is applicable.

SURVEILLANCE REQUIREMENTS

4.6.6.3 The drywell and suppression chamber oxygen concentration shall be verified to be within the limit in accordance with the Surveillance Frequency Control Program.

*See Special Test Exception 3.10.5.



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. 184
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 30, 2020, as supplemented by letter dated September 3, 2020, 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. 184, 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 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: February 4, 2021

ATTACHMENT TO LICENSE AMENDMENT NO. 184
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
3.6.3.2-1

Insert

License NPF-69
Page 4

TSs
3.6.3.2-1

(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. 184, 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.

3.6 CONTAINMENT SYSTEMS

3.6.3.2 Primary Containment Oxygen Concentration

LCO 3.6.3.2 The primary containment oxygen concentration shall be < 4.0 volume percent.

APPLICABILITY: MODES 1 and 2.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Primary containment oxygen concentration not within limit.	A.1 -----NOTE----- LCO 3.0.4.c is applicable ----- Restore oxygen concentration to within limit.	72 hours
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 3.	12 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.6.3.2.1 Verify primary containment oxygen concentration is within limits.	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. 336
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 30, 2020, as supplemented by letter dated September 3, 2020, 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. 336, 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 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 Subsequent Renewed Facility
Operating License

Date of Issuance: February 4, 2021

ATTACHMENT TO LICENSE AMENDMENT NO. 336

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
3.6-33

Insert

License DPR-44
Page 3

TSs
3.6-33

- (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. 336, 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

3.6 CONTAINMENT SYSTEMS

3.6.3.2 Primary Containment Oxygen Concentration

LCO 3.6.3.2 The primary containment oxygen concentration shall be
 < 4.0 volume percent.

APPLICABILITY: MODES 1 and 2.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Primary containment oxygen concentration not within limit.	A.1 -----NOTE----- LCO 3.0.4.c is applicable. ----- Restore oxygen concentration to within limit.	72 hours
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 3.	12 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.6.3.2.1 Verify primary containment oxygen concentration is within limits.	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. 339

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 30, 2020, as supplemented by letter dated September 3, 2020, 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. 339, 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 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 Subsequent Renewed Facility
Operating License

Date of Issuance: February 4, 2021

ATTACHMENT TO LICENSE AMENDMENT NO. 339

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
3.6-33

Insert

License DPR-56
Page 3

TSs
3.6-33

- (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. 339, 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

3.6 CONTAINMENT SYSTEMS

3.6.3.2 Primary Containment Oxygen Concentration

LCO 3.6.3.2 The primary containment oxygen concentration shall be < 4.0 volume percent.

APPLICABILITY: MODES 1 and 2.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Primary containment oxygen concentration not within limit.	A.1 -----NOTE----- LCO 3.0.4.c is applicable. ----- Restore oxygen concentration to within limit.	72 hours
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 3.	12 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.6.3.2.1 Verify primary containment oxygen concentration is within limits.	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. 285
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 30, 2020, as supplemented by letter dated September 3, 2020, 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. 285, 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: February 4, 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. 281
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 30, 2020, as supplemented by letter dated September 3, 2020, 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. 281, 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: February 4, 2021

ATTACHMENT TO LICENSE AMENDMENT NOS. 285 AND 281

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
3.6.2.5-1
3.6.3.1-1

Insert

License DPR-29
Page 4

License DPR-30
Page 4

TSs
3.6.2.5-1
3.6.3.1-1

B. Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 285, 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. 281, 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.

3.6 CONTAINMENT SYSTEMS

3.6.2.5 Drywell-to-Suppression Chamber Differential Pressure

LCO 3.6.2.5 The drywell pressure shall be maintained ≥ 1.0 psid above the pressure of the suppression chamber.

APPLICABILITY: MODE 1 with THERMAL POWER > 15% RTP.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Drywell-to-suppression chamber differential pressure not within limit.	A.1 -----NOTE----- LCO 3.0.4.c is applicable ----- Restore differential pressure to within limit.	72 hours
B. Required Action and associated Completion Time not met.	B.1 Reduce THERMAL POWER to $\leq 15\%$ RTP.	12 hours

3.6 CONTAINMENT SYSTEMS

3.6.3.1 Primary Containment Oxygen Concentration

LCO 3.6.3.1 The primary containment oxygen concentration shall be < 4.0 volume percent.

APPLICABILITY: MODE 1 and 2.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Primary containment oxygen concentration not within limit.	A.1 -----NOTE----- LCO 3.0.4.c is applicable ----- Restore oxygen concentration to within limit.	72 hours
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 3.	12 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.6.3.1.1 Verify primary containment oxygen concentration is within limits.	In accordance with the Surveillance Frequency Control Program



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO

AMENDMENT NO. 273 TO RENEWED FACILITY OPERATING LICENSE NO. DPR-19

AMENDMENT NO. 266 TO RENEWED FACILITY OPERATING LICENSE NO. DPR-25

AMENDMENT NO. 247 TO RENEWED FACILITY OPERATING LICENSE NO. NPF-11

AMENDMENT NO. 233 TO RENEWED FACILITY OPERATING LICENSE NO. NPF-18

AMENDMENT NO. 251 TO RENEWED FACILITY OPERATING LICENSE NO. NPF-39

AMENDMENT NO. 213 TO RENEWED FACILITY OPERATING LICENSE NO. NPF-85

AMENDMENT NO. 184 TO RENEWED FACILITY OPERATING LICENSE NO. NPF-69

AMENDMENT NO. 336 TO SUBSEQUENT RENEWED FACILITY
OPERATING LICENSE NO. DPR-44

AMENDMENT NO. 339 TO SUBSEQUENT RENEWED FACILITY
OPERATING LICENSE NO. DPR-56

AMENDMENT NO. 285 TO RENEWED FACILITY OPERATING LICENSE NO. DPR-29

AND AMENDMENT NO. 281 TO RENEWED FACILITY OPERATING LICENSE NO. DPR-30

EXELON GENERATION COMPANY, LLC

DRESDEN NUCLEAR POWER STATION, UNITS 2 AND 3

LASALLE COUNTY STATION, UNITS 1 AND 2

LIMERICK GENERATING 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. 50-237, 50-249, 50-373, 50-374, 50-352,

50-353, 50-410, 50-277, 50-278, 50-254, AND 50-265

1.0 INTRODUCTION

By application dated April 30, 2020 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML20121A274), as supplemented by letter dated September 3, 2020 (ADAMS Accession No. ML20247J525), Exelon Generation Company, LLC (Exelon) submitted a license amendment request for Dresden Nuclear Power Station, Units 2 and 3 (Dresden); LaSalle County Station, Units 1 and 2 (LaSalle); Limerick Generating Station, Units 1 and 2 (Limerick); Nine Mile Point Nuclear Station, Unit 2 (NMP-2); Peach Bottom Atomic Power Station, Units 2 and 3 (Peach Bottom); and Quad Cities Nuclear Power Station, Units 1 and 2 (Quad Cities) (collectively, the facilities). The amendments would revise the following technical specifications (TSs):

- Dresden and Quad Cities TS 3.6.2.5, “Drywell-to-Suppression Chamber Differential Pressure”;
- Dresden and Quad Cities TS 3.6.3.1, “Primary Containment Oxygen Concentration”;
- LaSalle, NMP-2, and Peach Bottom TS 3.6.3.2, “Primary Containment Oxygen Concentration”; and
- Limerick TS 3/4.6.6.3, “Drywell and Suppression Chamber Oxygen Concentration,” which consists of Specification 3.6.6.3 and Surveillance Requirement (SR) 3.6.6.3.

The proposed changes simplify and clarify the Applicability statements, which if misapplied, could conflict with the corresponding Required Actions. The proposed changes also remove the undefined term “scheduled plant shutdown” and provide adequate terminal actions.

The proposed changes are based, in part, on Technical Specifications Task Force (TSTF) Traveler TSTF-568, Revision 2, “Revise Applicability of BWR/4 [Boiling-Water Reactor/Type 4] TS 3.6.2.5 and TS 3.6.3.2” (ADAMS Accession No. ML19141A122). The U.S. Nuclear Regulatory Commission (NRC or the Commission) approved TSTF-568, Revision 2, by letter dated December 17, 2019 (ADAMS Package Accession No. ML19325C444). The NRC staff’s safety evaluation (SE) of the traveler was enclosed with the approval letter.

The September 3, 2020, supplemental letter was in response to an NRC request for additional information issued on August 25, 2020 (ADAMS Accession No. ML20239A798). The 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 July 6, 2020 (85 FR 40323).

2.0 REGULATORY EVALUATION

2.1 Description of Structures, Systems, Components and TS Sections

2.1.1 Current Drywell-to-Suppression Chamber Differential Pressure Control

The drywell-to-suppression chamber differential pressure control is a safety-related operational feature of Mark I containment designs. The containment designs at Dresden, Peach Bottom, and Quad Cities are all Mark I, but the Peach Bottom TSs do not include requirements for the drywell-to-suppression chamber differential pressure. Dresden and Quad Cities TS 3.6.2.5 requires a minimum differential pressure of 1.0 pounds per square inch differential (psid) to reduce the loss-of-coolant accident (LOCA) hydrodynamic loads during the Mark I containment

load definition short- and long-term programs.¹ The LOCA pool swell loads are significantly reduced because the differential pressure control reduces the length of the water leg in the downcomer. The LOCA vent clearing and pool swell due to bubble formation would occur earlier (i.e., at a lower drywell pressure resulting in lesser forces on the suppression chamber thereby increasing the safety margin for containment integrity, containment internal structures, and pressure boundary). Decreasing the allowable suppression chamber water level has a similar effect.

It is difficult to control the differential pressure during startup and shutdown transients. This is because of the variation of the drywell heat loads from the primary and auxiliary systems and because of the inerting (during startup) or the de-inerting (during shutdown) of containment. Inerting the containment during startup involves the addition of large volumes of nitrogen. De-inerting containment during shutdown involves the addition of large volumes of air. In order to allow operation during the time when differential pressure control is difficult, the current Dresden and Quad Cities TS 3.6.2.5 is applicable from 24 hours following startup after the rated thermal power (RTP) exceeds 15 percent to 24 hours prior to reducing thermal power less than 15 percent of RTP during a scheduled shutdown.

2.1.2 Current Containment Oxygen Concentration Requirement

The regulation at Title 10 of the *Code of Federal Regulations* (10 CFR) Section 50.44, "Combustible gas control for nuclear power reactors," states that for a plant with an inerted containment atmosphere, the oxygen concentration in the primary containment is required to be maintained below 4 percent by volume during normal plant operation. This requirement ensures that an accident that produces hydrogen does not result in a combustible mixture inside the primary containment. Currently, the TSs for each facility require primary containment oxygen concentration to be less than 4 percent by volume when in Mode 1 (Operational Condition 1 at Limerick) during the period from 24 hours after the thermal power exceeds 15 percent of RTP following startup, and to 24 hours prior to reducing the RTP to less than 15 percent of RTP during the next scheduled shutdown. TSTF-568, Revision 2, states that the 24-hour allowance above 15 percent of RTP is provided in the primary containment oxygen concentration specification to delay inerting primary containment for a plant startup and to accelerate de-inerting primary containment for a plant shutdown. This allowance is provided so that plant personnel can safely enter the primary containment without a breathing apparatus to perform the needed inspections and maintenance adjustments.

The Dresden, Peach Bottom, and Quad Cities containments consist of a drywell (in the shape of an inverted light bulb), a suppression chamber (in the shape of a toroid), and a network of vents which extend radially outward and downward from the drywell to the suppression chamber. The LaSalle, Limerick, and NMP-2 containments consist of a drywell (in the shape of a truncated cone), a suppression chamber directly below the drywell (in the shape of a right circular cylinder), and a network of vertical vents extending downward from the drywell to the suppression chamber. The containment atmosphere for each unit is inerted with nitrogen gas during normal operation to prevent a combustible mixture of hydrogen and oxygen from forming during accident conditions. Long-term control of post-LOCA hydrogen gas concentration is accomplished by adding additional nitrogen gas and then venting the primary containment through the standby gas treatment system.

¹ U.S. Nuclear Regulatory Commission, NUREG-0661, "Safety Evaluation Report, Mark I Containment Long-Term Program, Resolution of Generic Technical Activity A-7," July 1980 (ADAMS Accession No. ML072710452).

2.1.3 Pressure Suppression Following a LOCA

The drywell is immediately pressurized when a postulated line break occurs within the primary containment. As drywell pressure increases, drywell atmosphere (primarily nitrogen gas) and steam are blown down through the vents into the suppression pool via the downcomers. The steam condenses in the suppression pool which suppresses the peak pressure in the drywell. Non-condensable gases discharged into the suppression pool collect in the free air volume of the suppression chamber, increasing the suppression chamber pressure. As steam is condensed in the suppression pool and on the structures in the drywell, the pressure decreases until the suppression chamber pressure exceeds the drywell pressure and the suppression chamber-drywell vacuum breakers open and vent non-condensable gases back into the drywell.

2.1.4 Technical Specification for Drywell-to-Suppression Chamber Differential Pressure

For Dresden and Quad Cities, a drywell-to-suppression chamber differential pressure limit is required by TS 3.6.2.5 to ensure the containment conditions assumed in the safety analyses are met. Failure to maintain the required differential pressure could result in excessive forces on the suppression chamber due to higher water clearing loads from downcomer vents and higher-pressure buildup in the drywell during a LOCA. Drywell-to-suppression chamber differential pressure must be controlled when the primary containment is inert. TS 3.6.2.5 for Dresden and Quad Cities requires that the drywell pressure be maintained greater than or equal to 1.0 psid above the pressure of the suppression chamber.

2.1.5 Technical Specification for Primary Containment Oxygen Concentration

The primary containment oxygen concentration is maintained to ensure that a LOCA, a postulated event that produces hydrogen, does not result in a combustible mixture inside primary containment. TS 3.6.3.1 for Dresden and Quad Cities; TS 3.6.3.2 for LaSalle, NMP-2, and Peach Bottom; and TS 3/4.6.6.3 for Limerick require that the primary containment oxygen concentration be maintained below 4 percent by volume. Below this concentration, the primary containment is inerted and no combustion can occur.

2.2 Description of Proposed Technical Specification Changes

2.2.1 Proposed Changes to TS 3.6.2.5, "Drywell-to-Suppression Chamber Differential Pressure," for Dresden and Quad Cities

The Applicability of Dresden and Quad Cities TS 3.6.2.5 is revised as shown below.

Current TS Applicability	Proposed TS Applicability
MODE 1 during the time period: a. From 24 hours after THERMAL POWER is > 15% RTP following startup, to b. 24 hours prior to reducing THERMAL POWER to < 15% RTP prior to the next scheduled reactor shutdown.	MODE 1 with THERMAL POWER > 15% RTP.

The required actions and associated completion times (CTs) listed in Dresden and Quad Cities TS 3.6.2.5 are revised as shown in red below.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Drywell-to-suppression chamber differential pressure not within limit.	A.1 ----- NOTE ----- LCO 3.0.4.c is applicable. ----- Restore differential pressure to within limit.	72 24 hours
B. Required Action and associated Completion Time not met.	B.1 Reduce THERMAL POWER to ≤ 15% RTP.	12 8 hours

Currently, a note in Dresden and Quad Cities TS 3.6.2.5 allows the associated limiting condition for operation (LCO) to not be met for up to 4 hours during the performance of required surveillances. Exelon is proposing to delete this note to be consistent with the revised TS Applicability.

The NRC staff understands the overall purpose of the proposed changes to the TS Applicability and Required Action A.1 is to simplify the Applicability statement by adding a new note to Required Action A.1 and revising the associated CT. These changes provide similar operational flexibility but more closely follows established TS conventions.

2.2.2 Proposed Changes to the Primary Containment Oxygen Concentration TSs for Dresden, LaSalle, NMP-2, Peach Bottom, and Quad Cities

The Applicability of TS 3.6.3.2 for LaSalle and NMP-2 and TS 3.6.3.1 for Dresden and Quad Cities would be revised as shown below.

Current TS Applicability	Proposed TS Applicability
MODE 1 during the time period: a. From 24 hours after THERMAL POWER is > 15% RTP following startup, to b. 24 hours prior to reducing THERMAL POWER to < 15% RTP prior to the next scheduled reactor shutdown.	MODES 1 and 2.

The Applicability of TS 3.6.3.2 for Peach Bottom would be revised as shown below.

Current TS Applicability	Proposed TS Applicability
MODE 1 during the time period: a. From 24 hours after THERMAL POWER is > 15% RTP following startup, to b. 24 hours prior to reducing THERMAL POWER to < 15% RTP prior to a reactor shutdown.	MODES 1 and 2.

For these TSs, Required Actions A.1 and B.1 and their associated CTs are revised as shown in red below.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Primary containment oxygen concentration not within limit.	A.1 ----- NOTE ----- LCO 3.0.4.c is applicable. ----- Restore oxygen concentration to within limit.	72 24 hours
B. Required Action and associated Completion Time not met.	B.1 Be in Mode 3. Reduce- THERMAL POWER to ≤15% RTP.	12 8 hours

The NRC staff understands the overall purpose of the proposed changes is to simplify the Applicability statement by adding a new note and revising the CT. These changes provide operational flexibility but more closely follows established TS conventions and requires that the plant be in Mode 3 if oxygen concentration cannot be restored to within limits.

2.2.3 Proposed Changes to TS 3/4.6.6.3, “Drywell and Suppression Chamber Oxygen Concentration” for Limerick

For Limerick, the Applicability of TS LCO 3.6.6.3 would be revised as shown below.

Current TS Applicability	Proposed TS Applicability
<p>OPERATIONAL CONDITION 1*, during the time period:</p> <p>a. Within 24 hours** after THERMAL POWER is greater than 15% of RATED THERMAL POWER, following startup, to</p> <p>b. Within 24 hours** prior to reducing THERMAL POWER to less than 15% of RATED THERMAL POWER, preliminary to a scheduled reactor shutdown.</p> <p>*See Special Test Exception 3.10.5. **Specification 3.6.1.8 is applicable during this 24 hour period.</p>	<p>OPERATIONAL CONDITIONS 1* and 2.</p> <p>*See Special Test Exception 3.10.5.</p>

The associated Action for Limerick TS LCO 3.6.6.3 would be revised as shown in red:

With the drywell and/or suppression chamber oxygen concentration exceeding the limit, restore the oxygen concentration to within the limit within 24-72 hours or be in at least STARTUP HOT SHUTDOWN within the next 8-12 hours. The provision of Specification 3.0.4.c is applicable.

Limerick SR 4.6.6.3 would be revised as shown in red:

The drywell and suppression chamber oxygen concentration shall be verified to be within the limit ~~within 24 hours after THERMAL POWER is greater than 15% of RATED THERMAL POWER and~~ in accordance with the Surveillance Frequency Control Program ~~thereafter~~.

The NRC staff understands the overall purpose of the proposed changes is to simplify the Applicability statement by revising the associated Action. These changes provide operational flexibility but more closely follows established TS conventions and requires that the plant be in at least Operational Condition 3 (Hot Shutdown) if oxygen concentration cannot be restored to within limits.

2.3 Applicable Regulatory Requirements and Guidance

Section 50.90 of 10 CFR, "Application for amendment of license, construction permit, or early site permit," requires that whenever a licensee desires to amend the license, application for an amendment must be filed with the Commission fully describing the changes desired, and following as far as applicable, the form prescribed for original applications.

Under 10 CFR 50.92(a), determinations on whether to grant an applied-for license amendment are to be guided by the considerations that govern the issuance of initial licenses or construction permits to the extent applicable and appropriate. Both the common standards for licenses and construction permits in 10 CFR 50.40(a), and those specifically for issuance of operating licenses in 10 CFR 50.57(a)(3), provide that there must be "reasonable assurance" that the activities at issue will not endanger the health and safety of the public.

The regulation 10 CFR 50.36, "Technical specifications," establishes the regulatory requirements related to the content of TSs. Section 50.36(a)(1) requires an application for an operating license to include proposed TSs. A summary statement of the bases or reasons for such specifications, other than those covering administrative controls, must also be included in the application, but shall not become part of the TSs.

The regulation, 10 CFR 50.36(b), requires:

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.

The categories of items required to be in the TSs are listed in 10 CFR 50.36(c). 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 LCOs are not met, the licensee must shut down the reactor or follow any remedial action permitted by the TSs until the condition can be met. In addition, 10 CFR 50.36(c)(2)(ii)(B) requires a TS LCO of a nuclear reactor to be established for a process variable, design feature, or operating restriction that is an initial condition of a design-basis accident or transient analysis that either assumes the failure of or presents a challenge to the integrity of a fission product barrier.

In accordance with 10 CFR 50.36(c)(3), SRs are “requirements relating to test, calibration, or inspection to assure that the necessary quality of systems and components is maintained, that facility operation will be within safety limits, and that the limiting conditions for operation will be met.”

The regulation in 10 CFR 50.44(b)(2)(i) states: “All boiling water reactors with Mark I or Mark II type containments must have an inerted atmosphere.” Section 50.44(a)(1) of 10 CFR defines an “inerted atmosphere” as a containment atmosphere with less than 4 percent of oxygen by volume.

Chapter 6.2.1.1.C, Revision 7, “Pressure-Suppression Type BWR Containments” (ADAMS Accession No. ML063600403), of NUREG-0800, “Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants: LWR [Light-Water Reactor] Edition,” states: “The acceptability of LOCA pool dynamic loads for plants with Mark I containments is based on conformance with NRC acceptance criteria found in NUREG-0661.”

The NRC staff’s guidance for the review of TSs is in Chapter 16.0, Revision 3, “Technical Specifications” (ADAMS Accession No. ML100351425), of the NUREG-0800. As described therein, as part of the regulatory standardization effort, the NRC staff has prepared Standard Technical Specifications (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. For this license amendment request, the applicable STS is NUREG-1433, Revision 4.0, “Standard Technical Specifications, General Electric Plants BWR/4,” Volume 1, “Specifications,” and Volume 2, “Bases,” dated April 2012 (ADAMS Accession Nos. ML12104A192 and ML12104A193, respectively).

The Limerick TSs are based on a previous version of the STS (NUREG-0123, Revision 2), which has a different format and wording than the current STS. Chapter 16.0 of NUREG-0800 states that plants with TSs based on previous STS may partially adopt STS provisions without adopting the improved STS format. The variations in numbering, format, and nomenclature in the Limerick TSs do not affect the applicability of TSTF-568, Revision 2, to Limerick.

3.0 TECHNICAL EVALUATION

The proposed amendments are based, in part, on the NRC-approved TSTF-568, Revision 2. The NRC staff also considered the regulations and guidance discussed in Section 2.3 of this SE in its review.

3.1 Proposed Changes to TS 3.6.2.5 for Dresden and Quad Cities

3.1.1 Proposed Changes in the Applicability

For Dresden and Quad Cities, the licensee proposed to delete the time period, dependent on startup and shutdown times, from the Applicability section in TS 3.6.2.5 and to replace it with a thermal power value. This time period is “a. From 24 hours after THERMAL POWER is > 15% RTP following startup, to b. 24 hours prior to reducing THERMAL POWER to < 15% RTP prior to the next scheduled reactor shutdown.” This time period would be replaced by flexibilities and requirements in the revised CTs and the inserted note referencing LCO 3.0.4.c. This would result in requiring the drywell pressure during Mode 1 to be maintained above the specified limit whenever the thermal power is above 15 percent of RTP. The current limitations of

Applicability, dependent on startup and shutdown, were established to allow licensees operational flexibilities, such as containment entry to perform maintenance and surveillances while at power.

In TSTF-568, Revision 2, Attachment, General Electric (GE) Safety Communication (SC) 02-10, page 4, under the heading "Corrective/Preventive Actions," item 2, it is recommended that Mark I plants that use TS 3.6.2.5 should confirm that their containment is structurally designed for pool swell loads with a zero drywell-to-suppression chamber differential pressure. For these plants, the Mark I containment load definition program has defined the pool swell loads associated with zero drywell-to-suppression chamber differential pressure. NUREG-0661, Appendix A, Section 2.3, states that each plant with a differential pressure control (i.e., TS 3.6.2.5) shall perform a structural assessment to demonstrate that the containment can maintain its functional capability when the differential pressure control is out-of-service (i.e., the differential pressure is zero).

Dresden and Quad Cities are applying the drywell-to-suppression chamber differential pressure control TS 3.6.2.5. The licensee's plant-specific analysis reports, called the Plant Unique Analysis Reports (PUARs), for Dresden and Quad Cities were approved by the NRC.² As stated in SC 02-10, page 3, structural assessment based on zero drywell-to-suppression chamber differential pressure pool swell load definition was used to confirm the functional capability of the suppression chamber against the Service Level D limit. The SC02-10 also identifies the following two major conservatisms in the pool swell load definitions based on the Mark I quarter-scale tests:

- (a) The drywell pressurization test transient was based on the predicted drywell pressure from the NRC-approved conservative GE code M3CPT. This code predicts about 50 percent higher drywell pressurization than a realistic analysis using the GE-Hitachi code TRACG.
- (b) The break was simulated by air to pressurize the drywell, which produces a more severe pool swell response than a realistic nitrogen/steam mixture and enhances the bubble growth.

The NRC approvals of the PUARs for Dresden and Quad Cities confirmed that the licensee met the acceptance criteria specified in NUREG-0661, Appendix A, and reviewed and approved any exceptions the licensee took from the acceptance criteria. Therefore, the NRC staff approvals of the PUARs confirmed that with the drywell-to-suppression chamber differential pressure out-of-service, the containment is structurally designed for the pool swell loads during a large-break LOCA.

Based on the PUARs, the NRC staff finds it acceptable for the Dresden and Quad Cities reactors to not be depressurized when the differential pressure is out-of-service at less than or equal to 15 percent of RTP. Further, NUREG-0661, Section 3.12.7, concluded that if the

² Zwolinski, John A., NRC, letter to Farrar, Dennis L., Commonwealth Edison Company, "Mark I Containment Long Term Program, Re: Dresden Nuclear Power Station, Unit Nos. 2 and 3," dated September 18, 1985 (ADAMS Package Accession No. ML17195A951).

Zwolinski, John A., NRC, letter to Farrar, Dennis L., Commonwealth Edison Company, "Mark I Containment Long Term Program, Re: Quad Cities Nuclear Power Station, Units 1 and 2," dated February 15, 1986 (ADAMS Accession No. ML19199A123).

differential pressure is out-of-service, the frequency of occurrence of a large-break LOCA, is less than 10^{-7} per reactor-year, which is sufficiently small. This minimal frequency of occurrence paired with the short period during which plants are in the transition state of less than 15 percent of RTP, support the adequacy of this change because the LOCA dynamic loads are not adversely affected. The NRC staff determined the proposed deletion of the time period in the Applicability section of TS 3.6.2.5 for Dresden and Quad Cities is acceptable because it is now included in the note insertion (discussed in Section 3.1.2 of this SE) and change in the CT (discussed in Section 3.1.3 of this SE). In addition, the proposed change is acceptable since it simplifies and clarifies the Applicability statement and continues to provide the lowest functional capability of equipment required for safe operation of the facility, as required by 10 CFR 50.36(c)(2), by protecting containment integrity.

3.1.2 Proposed Changes in Required Action A.1

For Dresden and Quad Cities, in accordance with approved Traveler TSTF-568, Revision 2, the licensee proposed to add the following note to Required Action A.1 in TS 3.6.2.5: "LCO 3.0.4.c is applicable." LCO 3.0.4 for Dresden and Quad Cities states:

When an LCO is not met, entry into a MODE or other specified condition in the Applicability shall only be made:

- a. When the associated ACTIONS to be entered permit continued operation in the MODE or other specified condition in the Applicability for an unlimited period of time;
- b. After performance of a risk assessment addressing inoperable systems and components, consideration of the results, determination of the acceptability of entering the MODE or other specified condition in the Applicability, and establishment of risk management actions, if appropriate (exceptions to this Specification are stated in the individual Specifications); or
- c. When an allowance is stated in the individual value, parameter, or other Specification.

This Specification shall not prevent changes in MODES or other specified conditions in the Applicability that are required to comply with ACTIONS or that are part of a shutdown of the unit.

The criterion applicable to TS LCO 3.6.2.5 is LCO 3.0.4.c since LCO 3.6.2.5 establishes an individual value or parameter (i.e., drywell pressure maintained above a certain value). The new note will allow entry into the mode of applicability of TS LCO 3.6.2.5 with the drywell pressure outside of the required limit. This note allows the licensee operational flexibility as it permits entry into Mode 1 at greater than 15 percent of RTP when drywell pressure is outside of the required limit during startup configurations. The NRC staff concludes that the addition of the note is acceptable because it clarifies and simplifies the intent of the current TS LCO 3.6.2.5 Applicability statement "a." of allowing startup operation with the LCO not met.

3.1.3 Proposed Changes in the CT for Required Action A.1

For Dresden and Quad Cities, in accordance with approved Traveler TSTF-568, Revision 2, the licensee proposed to change the CT for Required Action A.1 in TS 3.6.2.5 from 8 hours to

72 hours. TSTF-568, Revision 2, stated that the proposed change will permit safe entry of personnel into the containment in Modes 1 and 2. The 72-hour CT provides 24 hours to de-inert the containment to permit safe personnel access, 24 hours to perform the required work, and 24 hours to re-inert containment. The NRC staff finds that the extended CT incorporates the time currently allowed through the Applicability statement in Section 3.1.1 of this SE. The NRC staff finds that 72 hours is reasonable to conduct these activities based on operating experience and the requested CT does not present a significant change in risk given the low probability that a large line break would occur during this period. Therefore, NRC staff finds this change acceptable.

3.1.4 Proposed Changes in the CT for Required Action B.1

For Dresden and Quad Cities, the licensee proposed to change the CT for Required Action B.1 in TS 3.6.2.5 from 8 hours to 12 hours. This change was not addressed in TSTF-568, Revision 2. In its letter dated September 3, 2020, the licensee stated that the change would make this CT consistent with the current STS in NUREG-1433, Revision 4. The STS Bases for TS 3.6.2.5 states, in part, that the 12-hour CT for Required Action B.1 "is reasonable, based on operating experience, to reduce reactor power from full power conditions in an orderly manner and without challenging plant systems." Based on this information, the NRC staff finds that the proposed change for Required Action B.1 is acceptable.

3.1.5 Proposed Deletion of LCO Note

Currently, a note in TS 3.6.2.5 for Dresden and Quad Cities allows the associated LCO to not be met for up to 4 hours during the performance of required surveillances. The licensee proposed to delete this note to be consistent with the revised TS Applicability. This note is not included in the current STS in NUREG-1433, Revision 4.0. The NRC staff finds that removal of this note is acceptable because the note merely provides operational flexibility that is not necessary to meet 10 CFR 50.36(c)(2) or 50.36(c)(3) and it makes TS 3.6.2.5 consistent with the STS.

3.1.6 Conclusion for the Proposed Changes to TS 3.6.2.5 for Dresden and Quad Cities

The NRC staff finds the proposed changes to TS 3.6.2.5 for Dresden and Quad Cities acceptable and the TSs will continue to meet 10 CFR 50.36(c)(2) because (1) the revised LCO provides the lowest functional capability of equipment required for safe operation of the facility by protecting containment integrity and (2) the revised remedial actions for when the LCO is not met continue to provide reasonable assurance of public health and safety.

3.2 Proposed Changes to the Primary Containment Oxygen Concentration TSs for Dresden, LaSalle, NMP-2, Peach Bottom, and Quad Cities

The TS requirements for the primary containment oxygen concentration are provided in TS 3.6.3.2 for LaSalle, NMP-2, and Peach Bottom and TS 3.6.3.1 for Dresden and Quad Cities. These TSs are referred to as TS 3.6.3.2 (or equivalent) in the discussion below.

3.2.1 Proposed Changes in the Applicability

For Dresden, LaSalle, NMP-2, Peach Bottom, and Quad Cities, in accordance with approved Traveler TSTF-568, Revision 2, the licensee proposed to expand the Applicability of the LCO in TS 3.6.3.2 (or equivalent) to Modes 1 and 2 without exception. The NRC staff finds the

proposed change acceptable because it is more restrictive since an unlikely LOCA event leading to a degraded core that could produce hydrogen has the highest probability of occurrence during Modes 1 and 2.

3.2.2 Proposed Changes in Required Action A.1

For Dresden, LaSalle, NMP-2, Peach Bottom, and Quad Cities, in accordance with approved Traveler TSTF-568, Revision 2, the licensee proposed to add the following note to Required Action A.1 in TS 3.6.3.2 (or equivalent): "LCO 3.0.4.c is applicable." LCO 3.0.4 for LaSalle, NMP-2, and Peach Bottom is identical to the Dresden and Quad Cities LCO 3.0.4 quoted in Section 3.1.2 of this SE. The new note would allow entering the mode of applicability of TS LCO 3.6.3.2 (or equivalent) with the LCO not met. Therefore, the proposed change would permit entry into Modes 1 and 2 with primary containment oxygen concentration higher than the required limit. The NRC staff concludes the addition of the note is acceptable because it clarifies and simplifies the intent of the current TS LCO 3.6.3.2 (or equivalent) Applicability statement "a." of allowing startup operation with the LCO not met.

3.2.3 Proposed Changes in the CT for Required Action A.1

For Dresden, LaSalle, NMP-2, Peach Bottom, and Quad Cities, in accordance with approved Traveler TSTF-568, Revision 2, the licensee proposed changing the CT from 24 hours to 72 hours based on the following sequence of operations: allow 24 hours to de-inert the containment to permit safe personnel access, allow 24 hours to perform the required maintenance or repair work, and allow 24 hours to inert the containment. The NRC staff determined that the presence of a higher oxygen concentration for the 72-hour CT is appropriate considering the low safety significance of the change for potential accidents and the additional restrictions and conservatisms in the revised Applicability.

3.2.4 Proposed Changes in Required Action B.1

For Dresden, LaSalle, NMP-2, Peach Bottom, and Quad Cities, in accordance with approved Traveler TSTF-568, Revision 2, the licensee proposed to change the Applicability statement of TS LCO 3.6.3.2 (or equivalent) to Mode 1 and 2. If the oxygen concentration cannot be restored within the required limit and CT of Required Action A.1, the reactor should be brought to Mode 3. In this Mode, the reactor would be in a hot shutdown condition (control rods fully inserted) with all reactor vessel head bolts fully tensioned.

The NRC staff recognizes that upon entering Mode 3, the decay heat is rapidly decreasing. Systems capable of handling the decay heat load at high pressure are available until the reactor pressure and thus water temperature is substantially reduced. As the decay heat continues to decrease, operators have increased time and options for achieving adequate water injection using the low-pressure emergency core cooling system to avoid core damage and associated generation of combustible gas. Therefore, the occurrence of a LOCA leading to degraded core is highly unlikely in Mode 3.

For Dresden, LaSalle, NMP-2, Peach Bottom, and Quad Cities, the NRC staff finds the proposed change to Required Action B.1 in TS 3.6.3.2 (or equivalent) acceptable because it provides a more appropriate terminal action since it requires the plant to be placed in a mode in which the LCO does not apply and the oxygen concentration limit is no longer required. The previous terminal action allowed an indefinite period of operation at power levels less than or equal to 15 percent of RTP.

Due to the low potential for hydrogen generation when the reactor is in Mode 3, inerting of containment in Mode 3 is not needed. Therefore, the NRC staff concluded the proposed change is acceptable because it continues to protect containment integrity and meets 10 CFR 50.36(c)(2) by providing the lowest functional capability of equipment required for safe operation of the plant.

3.2.5 Proposed Changes in the CT for Required Action B.1

For Dresden, LaSalle, NMP-2, Peach Bottom, and Quad Cities, in accordance with approved Traveler TSTF-568, Revision 2, the licensee proposed to change the CT for Required Action B.1 from 8 hours to 12 hours, stating that 12 hours is a reasonable time to reduce reactor power from full power conditions to Mode 3 in an orderly manner and without challenging plant systems. The proposed change from 8 hours to 12 hours for bringing the reactor to a hot shutdown condition from full power is acceptable to the NRC staff because it is not a significant change and is based on industry operating experience.

3.2.6 Conclusion for the Proposed Changes to the Primary Containment Oxygen Concentration TSs for Dresden, LaSalle, NMP-2, Peach Bottom, and Quad Cities

The NRC staff concludes that the proposed changes to the Applicability statements in TS 3.6.3.2 for LaSalle, NMP-2, and Peach Bottom and TS 3.6.3.1 for Dresden and Quad Cities are acceptable since they are more restrictive as the Applicability now extends to Modes 1 and 2 without exception. In addition, the occurrence of a LOCA that could lead to degraded core conditions with containment de-inerted, while in Mode 3, is unlikely. The NRC staff also concludes that the revised remedial actions for when the LCO is not met continue to provide reasonable assurance of public health and safety. Therefore, the proposed changes to TS 3.6.3.2 for LaSalle, NMP-2, and Peach Bottom and TS 3.6.3.1 for Dresden and Quad Cities are acceptable and continue to meet 10 CFR 50.36(c)(2).

3.3 Proposed Changes to TS 3/4.6.6.3 for Limerick

The approved Traveler TSTF-568, Revision 2, specifies revisions to the current STS in NUREG-1433, Revision 4.0. As discussed in Section 2.3 of this SE, the Limerick TSs are based on a previous version of the STS (NUREG-0123, Revision 2), which has a different format and wording than the current STS. Chapter 16.0 of NUREG-0800 states that plants with TSs based on previous STS may partially adopt STS provisions without adopting the improved STS format. The variations in numbering, format, and nomenclature in the Limerick TSs do not affect the applicability of TSTF-568, Revision 2, to Limerick.

3.3.1 Proposed Changes in the Applicability

The Limerick TSs use the term Operational Condition, which is equivalent to the term Mode in the current STS in NUREG-1433, Revision 4.0. In accordance with approved Traveler TSTF-568, Revision 2, the licensee proposed to expand the Applicability of the Limerick TS LCO 3.6.6.3 to Operational Conditions 1 and 2 with one apparent exception retained as a footnote to Operational Condition 1. This footnote references Special Test Exception 3.10.5, which could only be applied during the performance of the Startup Test Program at Limerick. The retention of the footnote does not affect the applicability of TSTF-568, Revision 2, because Special Test Exception 3.10.5 can no longer be used. The NRC staff finds the proposed change acceptable because it is more restrictive since an unlikely LOCA event leading to a

degraded core that could produce hydrogen has the highest probability of occurrence during Operational Conditions 1 and 2.

3.3.2 Proposed Changes in the Action Statement

The Limerick TSs use an action statement, rather than a table, to specify the required actions and associated completion times for conditions when an LCO is not met. In accordance with approved Traveler TSTF-568, Revision 2, the licensee proposed to add the following sentence to the Action statement for Limerick TS LCO 3.6.6.3: "The provision of Specification 3.0.4.c is applicable." The Limerick TS LCO 3.0.4 is identical to the Dresden and Quad Cities LCO 3.0.4 quoted in Section 3.1.2 of this SE. The new sentence would allow entering the mode of applicability of TS LCO 3.6.6.3 with the LCO not met. Therefore, the proposed change would permit entry into Operational Conditions 1 and 2 with the drywell and suppression chamber oxygen concentration higher than the required limit. The NRC staff concludes the addition of the sentence is acceptable because it clarifies and simplifies the intent of the current TS LCO 3.6.6.3 Applicability statement "a." of allowing startup operation with the LCO not met.

Currently, if the Limerick TS LCO 3.6.6.3 is not met, the Action statement requires the oxygen concentration limit to be restored within 24 hours. In accordance with approved Traveler TSTF-568, Revision 2, the licensee proposed changing this CT from 24 hours to 72 hours based on the following sequence of operations: allow 24 hours to de-inert the containment to permit safe personnel access, allow 24 hours to perform the required maintenance or repair work, and allow 24 hours to inert the containment. The NRC staff determined that the presence of a higher oxygen concentration for the 72-hour CT is appropriate considering the low safety significance of the change for potential accidents and the additional restrictions and conservatisms in the revised Applicability.

In accordance with approved Traveler TSTF-568, Revision 2, the licensee proposed to change the Applicability statement of Limerick TS LCO 3.6.6.3 to Operational Conditions 1 and 2. If the oxygen concentration cannot be restored to the required limit in the LCO within the proposed 72-hour CT, the reactor should be brought to Operational Condition 3 (Hot Shutdown). In Operational Condition 3, the reactor would be in a hot shutdown condition (control rods fully inserted) with all reactor vessel head bolts fully tensioned.

The NRC staff recognizes that upon entering Operational Condition 3, the decay heat is rapidly decreasing. Steam is initially available for operating the reactor core isolation cooling/high-pressure coolant injection steam-turbine-driven pumps until the reactor pressure and thus water temperature is substantially reduced. As the decay heat continues to decrease, operators have increased time and options for achieving adequate water injection using the low-pressure emergency core cooling system to avoid core damage and associated generation of combustible gas. Therefore, the occurrence of a LOCA leading to degraded core is highly unlikely in Operational Condition 3.

If the Limerick drywell and/or suppression chamber oxygen concentration cannot be restored to the required limit within the proposed 72-hour CT, the licensee proposed to place the reactor into at least Hot Shutdown within the next 12 hours. The licensee stated that this 12-hour CT is a reasonable amount of time to reduce reactor power from full power conditions to Hot Shutdown in an orderly manner and without challenging plant systems. The current terminal action allows an indefinite period of operation at power levels less than or equal to 15 percent of RTP. The NRC staff finds this proposed change acceptable because it provides a more appropriate terminal action since it requires the plant to be placed in an Operational Condition in

which the Limerick TS LCO 3.6.6.3 does not apply and the oxygen concentration limit is no longer required. In addition, the proposed change in the CT (from 8 hours to 12 hours) for bringing the reactor to a hot shutdown condition from full power is acceptable to the NRC staff because it is not a significant change and is based on industry operating experience.

Due to the low potential for hydrogen generation when the reactor is in Operational Condition 3, inerting of containment in Operational Condition 3 is not needed. Therefore, the NRC staff concluded the proposed change is acceptable because it continues to protect containment integrity and meets 10 CFR 50.36(c)(2) by providing the lowest functional capability of equipment required for safe operation of the plant.

3.3.3 Proposed Changes to SR 4.6.6.3

The licensee proposed to revise the Limerick SR 4.6.6.3 as shown in red:

The drywell and suppression chamber oxygen concentration shall be verified to be within the limit ~~within 24 hours after THERMAL POWER is greater than 15% of RATED THERMAL POWER and~~ in accordance with the Surveillance Frequency Control Program ~~thereafter~~.

The proposed changes to the Limerick SR 4.6.6.3 are necessary to make it consistent with the proposed changes to the Applicability of LCO 3.6.6.3. Therefore, the NRC staff concludes that 10 CFR 50.36(c)(3) will continue to be met because the revised Limerick SR 4.6.6.3 will continue to require appropriate inspections to assure that LCO 3.6.6.3 will be met when the LCO is applicable.

3.3.4 Conclusion for the Proposed Changes to TS 3/4.6.6.3 for Limerick

The NRC staff concludes the proposed changes in the Applicability statement for Limerick TS LCO 3.6.6.3 are acceptable since they are more restrictive as the Applicability now extends to Operational Conditions 1 and 2 without exception. In addition, the occurrence of a LOCA that could lead to degraded core conditions with containment de-inerted, while in Operational Condition 3, is unlikely. The NRC staff also concludes that the revised remedial actions for when the LCO is not met continue to provide reasonable assurance of public health and safety. Therefore, the proposed changes to Limerick TS 3/4.6.6.3 are acceptable and continue to meet 10 CFR 50.36(c)(2) and 50.36(c)(3).

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 5, 2021. The State officials had no comments.

5.0 ENVIRONMENTAL CONSIDERATION

The amendments change a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and changes surveillance requirements. 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 40323; July 6, 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.

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SUBJECT: DRESDEN NUCLEAR POWER STATION, UNITS 2 AND 3; LASALLE COUNTY STATION, UNITS 1 AND 2; LIMERICK GENERATING 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-568 (EPID L-2020-LLA-0096) DATED FEBRUARY 4, 2021

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