

ENCLOSURE 1

CONFORMING LICENSE AMENDMENTS

Enclosures:

- 1.01 Amendment No. 224 to Renewed Facility Operating License No. NPF-72
- 1.02 Amendment No. 224 to Renewed Facility Operating License No. NPF-77
- 1.03 Amendment No. 226 to Renewed Facility Operating License No. NPF-37
- 1.04 Amendment No. 226 to Renewed Facility Operating License No. NPF-66
- 1.05 Amendment No. 343 to Renewed Facility Operating License No. DPR-53
- 1.06 Amendment No. 321 to Renewed Facility Operating License No. DPR-69
- 1.07 Amendment No. 243 to Facility Operating License No. NPF-62
- 1.08 Amendment No. 50 to Facility Operating License No. DPR-2
- 1.09 Amendment No. 277 to Renewed Facility Operating License No. DPR-19
- 1.10 Amendment No. 270 to Renewed Facility Operating License No. DPR-25
- 1.11 Amendment No. 347 to Renewed Facility Operating License No. DPR-59
- 1.12 Amendment No. 254 to Renewed Facility Operating License No. NPF-11
- 1.13 Amendment No. 240 to Renewed Facility Operating License No. NPF-18
- 1.14 Amendment No. 255 to Renewed Facility Operating License No. NPF-39
- 1.15 Amendment No. 217 to Renewed Facility Operating License No. NPF-85
- 1.16 Amendment No. 247 to Renewed Facility Operating License No. DPR-63
- 1.17 Amendment No. 189 to Renewed Facility Operating License No. NPF-69
- 1.18 Amendment No. 17 to Facility Operating License No. DPR-12
- 1.19 Amendment No. 340 to Subsequent Renewed Facility Operating License No. DPR-44
- 1.20 Amendment No. 343 to Subsequent Renewed Facility Operating License No. DPR-56
- 1.21 Amendment No. 289 to Renewed Facility Operating License No. DPR-29
- 1.22 Amendment No. 285 to Renewed Facility Operating License No. DPR-30
- 1.23 Amendment No. 147 to Renewed Facility Operating License No. DPR-18
- 1.24 Amendment No. 341 to Renewed Facility Operating License No. DPR-70
- 1.25 Amendment No. 322 to Renewed Facility Operating License No. DPR-75
- 1.26 Amendment No. 302 to Renewed Facility License No. DPR-50
- 1.27 Amendment No. 12 to Renewed Materials License No. SNM-2505



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

CONSTELLATION ENERGY GENERATION, LLC

DOCKET NO. STN 50-456

BRAIDWOOD STATION, UNIT 1

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 224
Renewed License No. NPF-72

1. The U.S. Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Exelon Generation Company, LLC dated February 25, 2021, as supplemented by letters dated March 25, June 11, September 16, and September 29, 2021, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, Renewed Facility Operating License No. NPF-72 is hereby amended as indicated in the attachment to this license amendment.
3. This license amendment is effective as of the date of its issuance and shall be implemented within 15 days of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Bo M. Pham, Director
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Renewed Facility
Operating License

Date of Issuance: February 1, 2022



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

CONSTELLATION ENERGY GENERATION, LLC

DOCKET NO. STN 50-457

BRAIDWOOD STATION, UNIT 2

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 224
Renewed License No. NPF-77

1. The U.S. Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Exelon Generation Company, LLC dated February 25, 2021, as supplemented by letters dated March 25, June 11, September 16, and September 29, 2021, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, Renewed Facility Operating License No. NPF-77 is hereby amended as indicated in the attachment to this license amendment.
3. This license amendment is effective as of the date of its issuance and shall be implemented within 15 days of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Bo M. Pham, Director
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Renewed Facility
Operating License

Date of Issuance: February 1, 2022

ATTACHMENT TO LICENSE AMENDMENT NOS. 224 AND 224

RENEWED FACILITY OPERATING LICENSE NOS. NPF-72 AND NPF-77

BRAIDWOOD STATION, UNITS 1 AND 2

DOCKET NOS. STN 50-456 AND STN 50-457

Replace the following pages of the Renewed Facility Operating Licenses; Appendix A, Technical Specifications; and Appendix B, Environmental Protection Plan, 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-72

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License NPF-77

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Appendix A

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Appendix B

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License NPF-72

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License NPF-77

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Appendix A

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Appendix B

cover page



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

CONSTELLATION ENERGY GENERATION, LLC

DOCKET NO. STN 50-456

BRAIDWOOD STATION, UNIT 1

RENEWED FACILITY OPERATING LICENSE

Renewed License No. NPF-72

1. The Nuclear Regulatory Commission (the Commission or the NRC) has found that:
 - A. The application for a renewed license filed by the applicant* complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's regulations set forth in 10 CFR Chapter I, and all required notifications to other agencies or bodies have been duly made;
 - B. Construction of Braidwood Station, Unit 1 (the facility) has been substantially completed in conformity with Construction Permit No. CPPR-132 and the application, as amended, the provisions of the Act and the regulations of the Commission;
 - C. The facility will operate in conformity with the application, as amended, the provisions of the Act, and the regulations of the Commission (except as exempted from compliance in Section 2.D below);
 - D. There is reasonable assurance: (i) that the activities authorized by this renewed operating license 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 set forth in 10 CFR Chapter I (except as exempted from compliance in Section 2.D. below);
 - E. Constellation Energy Generation, LLC is technically qualified to engage in the activities authorized by this renewed license in accordance with the Commission's regulations set forth in 10 CFR Chapter I;
 - F. Constellation Energy Generation, LLC has satisfied the applicable provisions of 10 CFR Part 140, "Financial Protection Requirements and Indemnity Agreements," of the Commission's regulations;

* The Nuclear Regulatory Commission approved the transfer of the license from Commonwealth Edison Company to Exelon Generation Company, LLC on August 3, 2000. The Nuclear Regulatory Commission approved a transaction on November 16, 2021, that resulted in Exelon Generation Company, LLC being renamed Constellation Energy Generation, LLC.

Renewed License No. NPF-72
Amendment No. 224

- G. The issuance of this renewed license will not be inimical to the common defense and security or to the health and safety of the public;
 - H. After weighing the environmental, economic, technical and other benefits of the facility against environmental and other costs and considering available alternatives, the issuance of Renewed Facility Operating License No. NPF-72, subject to the conditions for protection of the environment set forth in the Environmental Protection Plan attached as Appendix B, is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied;
 - I. The receipt, possession, and use of source, byproduct and special nuclear material as authorized by this renewed license will be in accordance with the Commission's regulations in 10 CFR Parts 30, 40 and 70; and
 - J. Actions have been identified and have been or will be taken with respect to (1) managing the effects of aging during the period of extended operation on the functionality of structures and components that have been identified to require review under 10 CFR 54.21(a)(1), and (2) time-limited aging analyses that have been identified to require review under 10 CFR 54.21(c), such that there is reasonable assurance that the activities authorized by this renewed license will continue to be conducted in accordance with the current licensing basis, as defined in 10 CFR 54.3, for the facility, and that any changes made to the facility's current licensing basis in order to comply with 10 CFR 54.29(a) are in accordance with the Act and the Commission's regulations.
2. Facility Operating License No. NPF-72, dated July 2, 1987, as amended, is hereby superseded by Renewed Facility Operating License No. NPF-72, issued to Constellation Energy Generation, LLC (the licensee) to read as follows:
- A. This renewed license applies to Braidwood Station, Unit 1, a pressurized water reactor, and associated equipment (the facility), owned by the licensee. The facility is located in north-eastern Illinois, 3 miles southwest of the Kankakee River, 20 miles south-southwest of the town of Joliet, and 60 miles southwest of Chicago, Illinois. The facility is within Reed Township, Will County, Illinois, and is described in the Byron/Braidwood Stations' Final Safety Analysis Report, as supplemented and amended, and in the Environmental Report, as supplemented and amended.
 - B. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses:
 - (1) Constellation Energy Generation, LLC, pursuant to Section 103 of the Act and 10 CFR Part 50, to possess, use and operate the facility at the above designated location in Will County, Illinois, in accordance with the procedures and limitations set forth in this renewed license;

- (2) Constellation Energy Generation, LLC, 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) Constellation Energy Generation, 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) Constellation Energy Generation, 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) Constellation Energy Generation, 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 the facility.

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:

(1) Maximum Power Level

The licensee is authorized to operate the facility at reactor core power levels not in excess of 3645 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. 224 and the Environmental Protection Plan contained in Appendix B, both of which are attached hereto, are hereby incorporated into the renewed license. The licensee shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

(3) Emergency Planning

In the event that the NRC finds that the lack of progress in completion of the procedures in the Federal Emergency Management Agency's final rule, 44 CFR Part 350, is an indication that a major substantive problem exists in achieving or maintaining an adequate state of emergency preparedness, the provision of 10 CFR Section 50.54(s)(2) will apply.

(4) Deleted.

(5) Deleted.

(6) Deleted.

(7) Additional Conditions

The Additional Conditions contained in Appendix C, as revised through Amendment No. 193, are hereby incorporated into this renewed license. The licensee shall operate the facility in accordance with the Additional Conditions.

(8) Constellation Energy Generation, LLC shall provide to the Director of the Office of Nuclear Reactor Regulation or the Director of the Office of Nuclear Material Safety and Safeguards, as applicable, a copy of any application, at the time it is filed, to transfer (excluding grants of security interests or liens) from Constellation Energy Generation, LLC to its direct or indirect parent, or to any other affiliated company, facilities for the production, transmission, or distribution of electric energy having a depreciated book value exceeding ten percent (10%) of Constellation Energy Generation, LLC's consolidated net utility plant, as recorded on Constellation Energy Generation, LLC's books of account.

(9) Deleted.

(10) Deleted.

(11) Deleted.

(12) Mitigation Strategy License Condition

Develop and maintain strategies for addressing large fires and explosions and that include the following key areas:

(a) Fire fighting response strategy with the following elements:

1. Pre-defined coordinated fire response strategy and guidance
2. Assessment of mutual aid fire fighting assets
3. Designated staging areas for equipment and materials
4. Command and control
5. Training of response personnel

(c) The flux thimble tube corrective actions, inspections, and replacements identified in the SER, Commitment No. 24, for Braidwood Units 1 and 2, shall be implemented in accordance with the schedule in the Commitment. Periodic eddy current testing/inspections of all flux thimble tubes shall be performed at least every two refueling outages, and the data shall be trended and retained in auditable form. A flux thimble tube shall not remain in service for more than two (2) operating fuel cycles without successful completion of eddy current testing for that thimble tube.

(14) Adoption of 10 CFR 50.69, "Risk-informed categorization and treatment of structures, systems, and components for nuclear power plants"

Constellation Energy Generation, LLC is approved to implement 10 CFR 50.69 using the processes for categorization of Risk-Informed Safety Class (RISC)-1, RISC-2, RISC-3, and RISC-4 structures, systems, and components (SSCs) using:

Probabilistic Risk Assessment (PRA) models to evaluate risk associated with internal events, including internal flooding, and internal fire; the shutdown safety assessment process to assess shutdown risk; the Arkansas Nuclear One, Unit 2 (ANO-2) passive categorization method to assess passive component risk for Class 2, Class 3, and non-Code class SSCs and their associated supports; and the results of non-PRA evaluations that are based on the IPEEE Screening Assessment for External Hazards, i.e., seismic margin analysis (SMA) to evaluate seismic risk, and a screening of other external hazards updated using the external hazard screening significance process identified in ASME/ANS PRA Standard RA-Sa-2009; as specified in the license amendment No. 198, dated October 22, 2018.

The licensee will complete the updated implementation items listed in Attachment 1 of Exelon letter to NRC dated September 13, 2018, prior to implementation of 10 CFR 50.69. All issues identified in the attachment will be addressed and any associated changes will be made, focused scope peer reviews will be performed on changes that are PRA upgrades as defined in the PRA standard (ASME/ANS RA-Sa-2009, as endorsed by RG 1.200, Revision 2), and any findings will be resolved and reflected in the PRA of record prior to implementation of the 10 CFR 50.69 categorization process.

Prior NRC approval, under 10 CFR 50.90, is required for a change to the categorization process specified above (e.g., change from a seismic margins approach to a seismic probabilistic risk assessment approach).

- D. An exemption was previously granted pursuant to 10 CFR 70.24. The exemption was granted with NRC materials license No. SNM-1938, issued October 8, 1985, and relieved the licensee from the requirement of having a criticality alarm system. Therefore, the licensee is exempted from the criticality alarm system provision of 10 CFR 70.24 so far as this section applies to the storage of fuel assemblies held under this license.
- E. The licensee shall implement and maintain in effect all provisions of the approved fire protection program as described in the Final Safety Analysis Report, as supplemented and amended, and as approved in the SER dated November 1983 and its supplements, subject to the following provision:

The licensee may make changes to the approved fire protection program without prior approval of the Commission, only if those changes would not adversely affect the ability to achieve and maintain safe shutdown in the event of a fire.

- F. Constellation Energy Generation, LLC shall fully implement and maintain in effect all provisions of the Commission-approved physical security, training and qualifications, 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: "Braidwood Station Security Plan, Training and Qualification Plan, and Safeguards Contingency Plan, Revision 3", submitted by letter dated May 17, 2006.

Constellation Energy Generation, LLC shall fully implement and maintain in effect all provisions of the Commission-approved cyber security plan (CSP), including changes made pursuant to the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The CSP was approved by License Amendment No. 168 and modified by License Amendment No. 185.

- G. Deleted
- H. The licensee shall have and maintain financial protection of such type and in such amounts as the Commission shall require in accordance with Section 170 of the Atomic Energy Act of 1954, as amended, to cover public liability claims.

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



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

CONSTELLATION ENERGY GENERATION, LLC

DOCKET NO. STN 50-457

BRAIDWOOD STATION, UNIT 2

RENEWED FACILITY OPERATING LICENSE

Renewed License No. NPF-77

1. The Nuclear Regulatory Commission (the Commission or the NRC) has found that:
 - A. The application for a renewed license filed by the applicant* complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's regulations set forth in 10 CFR Chapter I, and all required notifications to other agencies or bodies have been duly made;
 - B. Construction of Braidwood Station, Unit 2 (the facility) has been completed in conformity with Construction Permit No. CPPR-133 and the application, as amended, the provisions of the Act and the regulations of the Commission;
 - C. The facility will operate in conformity with the application, as amended, the provisions of the Act, and the regulations of the Commission (except as exempted from compliance in Section 2.D. below);
 - D. There is reasonable assurance: (i) that the activities authorized by this operating license 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 set forth in 10 CFR Chapter I (except as exempted from compliance in Section 2.D. below);
 - E. Constellation Energy Generation, LLC is technically qualified to engage in the activities authorized by this renewed license in accordance with the Commission's regulations set forth in 10 CFR Chapter I;
 - F. Constellation Energy Generation, LLC has satisfied the applicable provisions of 10 CFR Part 140, "Financial Protection Requirements and Indemnity Agreements," of the Commission's regulations;

* The Nuclear Regulatory Commission approved the transfer of the license from Commonwealth Edison Company to Exelon Generation Company, LLC on August 3, 2000. The Nuclear Regulatory Commission approved a transaction on November 16, 2021, that resulted in Exelon Generation Company, LLC being renamed Constellation Energy Generation, LLC.

Renewed License No. NPF-77
Amendment No. 224

- G. The issuance of this renewed license will not be inimical to the common defense and security or to the health and safety of the public;
 - H. After weighing the environmental, economic, technical and other benefits of the facility against environmental and other costs and considering available alternatives, the issuance of Renewed Facility Operating License No. NPF-77, subject to the conditions for protection of the environment set forth in the Environmental Protection Plan attached as Appendix B to Renewed License No. NPF-72 issued January 27, 2016 is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied;
 - I. The receipt, possession, and use of source, byproduct and special nuclear material as authorized by this renewed license will be in accordance with the Commission's regulations in 10 CFR Parts 30, 40 and 70; and
 - J. Actions have been identified and have been or will be taken with respect to (1) managing the effects of aging during the period of extended operation on the functionality of structures and components that have been identified to require review under 10 CFR 54.21(a)(1), and (2) time-limited aging analyses that have been identified to require review under 10 CFR 54.21(c), such that there is reasonable assurance that the activities authorized by this renewed license will continue to be conducted in accordance with the current licensing basis, as defined in 10 CFR 54.3, for the facility, and that any changes made to the facility's current licensing basis in order to comply with 10 CFR 54.29(a) are in accordance with the Act and the Commission's regulations.
2. Facility Operating License No. NPF-77, dated May 20, 1988, as amended, is hereby superseded by Renewed Facility Operating License No. NPF-77, issued to Constellation Energy Generation, LLC (the licensee) to read as follows:
- A. This renewed license applies to Braidwood Station, Unit 2, a pressurized water reactor, and associated equipment (the facility), owned by the licensee. The facility is located in north-eastern Illinois, 3 miles southwest of the Kankakee River, 20 miles south-southwest of the town of Joliet, and 60 miles southwest of Chicago, Illinois. The facility is within Reed Township, Will County, Illinois, and is described in the Byron/Braidwood Stations' Final Safety Analysis Report, as supplemented and amended, and in the Environmental Report, as supplemented and amended.
 - B. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses:
 - (1) Constellation Energy Generation, LLC, pursuant to Section 103 of the Act and 10 CFR Part 50, to possess, use and operate the facility at the above designated location in Will County, Illinois, in accordance with the procedures and limitations set forth in this renewed license;

- (2) Constellation Energy Generation, LLC, 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) Constellation Energy Generation, 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) Constellation Energy Generation, 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) Constellation Energy Generation, 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 the facility.

C. The 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:

(1) Maximum Power Level

The licensee is authorized to operate the facility at reactor core power levels not in excess of 3645 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. 224 and the Environmental Protection Plan contained in Appendix B, both of which are attached to Renewed License No. NPF-72, dated January 27, 2016, are hereby incorporated into the renewed license. The licensee shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

(3) Emergency Planning

In the event that the NRC finds that the lack of progress in completion of the procedures in the Federal Emergency Management Agency's final rule, 44 CFR Part 350, is an indication that a major substantive problem exists in achieving or maintaining an adequate state of emergency preparedness, the provision of 10 CFR Section 50.54(s)(2) will apply.

(4) Deleted.

(5) Deleted.

(6) Additional Conditions

The Additional Conditions contained in Appendix C, as revised through Amendment No. 193, are hereby incorporated into this renewed license. The licensee shall operate the facility in accordance with the Additional Conditions.

(7) Constellation Energy Generation, LLC shall provide to the Director of the Office of Nuclear Reactor Regulation or the Director of the Office of Nuclear Material Safety and Safeguards, as applicable, a copy of any application, at the time it is filed, to transfer (excluding grants of security interests or liens) from Constellation Energy Generation, LLC to its direct or indirect parent, or to any other affiliated company, facilities for the production, transmission, or distribution of electric energy having a depreciated book value exceeding ten percent (10%) of Constellation Energy Generation, LLC's consolidated net utility plant, as recorded on Constellation Energy Generation, LLC's books of account.

(8) Deleted.

(9) Deleted.

(10) Deleted.

(11) Mitigation Strategy License Condition

Develop and maintain strategies for addressing large fires and explosions and that include the following key areas:

(a) Fire fighting response strategy with the following elements:

1. Pre-defined coordinated fire response strategy and guidance
2. Assessment of mutual aid fire fighting assets
3. Designated staging areas for equipment and materials
4. Command and control
5. Training of response personnel

- (c) The flux thimble tube corrective actions, inspections, and replacements identified in the SER, Commitment No. 24, for Braidwood Units 1 and 2, shall be implemented in accordance with the schedule in the Commitment. Periodic eddy current testing/inspections of all flux thimble tubes shall be performed at least every two refueling outages, and the data shall be trended and retained in auditable form. A flux thimble tube shall not remain in service for more than two (2) operating fuel cycles without successful completion of eddy current testing for that thimble tube.
- (d) The Braidwood Unit 2 reactor head closure stud hole location No. 35 will be repaired no later than June 18, 2027, or before the end of the last refueling outage prior to the period of extended operation (whichever occurs later), so that all 54 reactor head closure studs are operable and tensioned during the period of extended operation.

(13) Adoption of 10 CFR 50.69, "Risk-informed categorization and treatment of structures, systems, and components for nuclear power plants"

Constellation Energy Generation, LLC is approved to implement 10 CFR 50.69 using the processes for categorization of Risk-Informed Safety Class (RISC)-1, RISC-2, RISC-3, and RISC-4 structures, systems, and components (SSCs) using:

Probabilistic Risk Assessment (PRA) models to evaluate risk associated with internal events, including internal flooding, and internal fire; the shutdown safety assessment process to assess shutdown risk; the Arkansas Nuclear One, Unit 2 (ANO-2) passive categorization method to assess passive component risk for Class 2, Class 3, and non-Code class SSCs and their associated supports; and the results of non-PRA evaluations that are based on the IPEEE Screening Assessment for External Hazards, i.e., seismic margin analysis (SMA) to evaluate seismic risk, and a screening of other external hazards updated using the external hazard screening significance process identified in ASME/ANS PRA Standard RA-Sa-2009; as specified in the license amendment No. 198, dated October 22, 2018.

The licensee will complete the updated implementation items listed in Attachment 1 of Exelon letter to NRC dated September 13, 2018, prior to implementation of 10 CFR 50.69. All issues identified in the attachment will be addressed and any associated changes will be made, focused scope peer reviews will be performed on changes that are PRA upgrades as defined in the PRA standard (ASME/ANS RA-Sa-2009, as endorsed by RG 1.200, Revision 2), and any findings will be resolved and reflected in the PRA of record prior to implementation of the 10 CFR 50.69 categorization process.

Prior NRC approval, under 10 CFR 50.90, is required for a change to the categorization process specified above (e.g., change from a seismic margins approach to a seismic probabilistic risk assessment approach).

- D. An exemption was previously granted pursuant to 10 CFR 70.24. The exemption was granted with NRC materials license No. SNM-1938, issued October 8, 1985, and relieved the licensee from the requirement of having a criticality alarm system. Therefore, the licensee is exempted from the criticality alarm system provision of 10 CFR 70.24 so far as this section applies to the storage of fuel assemblies held under this license.
- E. The licensee shall implement and maintain in affect all provisions of the approved fire protection program as described in the Final Safety Analysis Report, as supplemented and amended, and as approved in the SER dated November 1983 and its supplements, subject to the following provision:
- The licensee may make changes to the approved fire protection program without prior approval of the Commission, only if these changes would not adversely affect the ability to achieve and maintain safe shutdown in the event of a fire.
- F. Constellation Energy Generation, LLC shall fully implement and maintain in effect all provisions of the Commission-approved physical security, training and qualifications, 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: "Braidwood Station Security Plan, Training and Qualification Plan, and Safeguards Contingency Plan, Revision 3," submitted by letter dated May 17, 2006.
- Constellation Energy Generation, LLC shall fully implement and maintain in effect all provisions of the Commission-approved cyber security plan (CSP), including changes made pursuant to the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The CSP was approved by License Amendment No. 168 and modified by License Amendment No. 185.
- G. Deleted
- H. The licensee shall have and maintain financial protection of such type and in such amounts as the Commission shall require in accordance with Section 170 of the Atomic Energy Act of 1954, as amended, to cover public liability claims.

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

5.0 ADMINISTRATIVE CONTROLS

5.3 Facility Staff Qualifications

- 5.3.1 Each member of the facility staff shall meet or exceed the minimum qualifications referenced for comparable positions as specified in the Constellation Energy Generation, LLC Quality Assurance Topical Report.

APPENDIX B
TO FACILITY OPERATING LICENSE NOS. NPF-72 & NPF-77
CONSTELLATION ENERGY GENERATION, LLC
BRAIDWOOD STATION UNITS 1 & 2
DOCKET NOS. 50-456 AND 50-457

ENVIRONMENTAL PROTECTION PLAN
(NON-RADIOLOGICAL)



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

CONSTELLATION ENERGY GENERATION, LLC

DOCKET NO. STN 50-454

BYRON STATION, UNIT NO. 1

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 226
Renewed License No. NPF-37

1. The U.S. Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Exelon Generation Company, LLC dated February 25, 2021, as supplemented by letters dated March 25, June 11, September 16, and September 29, 2021, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, Renewed Facility Operating License No. NPF-37 is hereby amended as indicated in the attachment to this license amendment.
3. This license amendment is effective as of the date of its issuance and shall be implemented within 15 days of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Bo M. Pham, Director
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Renewed Facility
Operating License

Date of Issuance: February 1, 2022



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

CONSTELLATION ENERGY GENERATION, LLC

DOCKET NO. STN 50-455

BYRON STATION, UNIT NO. 2

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 226
Renewed License No. NPF-66

1. The U.S. Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Exelon Generation Company, LLC dated February 25, 2021, as supplemented by letters dated March 25, June 11, September 16, and September 29, 2021, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, Renewed Facility Operating License No. NPF-66 is hereby amended as indicated in the attachment to this license amendment.
3. This license amendment is effective as of the date of its issuance and shall be implemented within 15 days of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Bo M. Pham, Director
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Renewed Facility
Operating License

Date of Issuance: February 1, 2022

ATTACHMENT TO LICENSE AMENDMENT NOS. 226 AND 226

RENEWED FACILITY OPERATING LICENSE NOS. NPF-37 AND NPF-66

BYRON STATION, UNIT NOS. 1 AND 2

DOCKET NOS. STN 50-454 AND STN 50-455

Replace the following pages of the Renewed Facility Operating Licenses; Appendix A, Technical Specifications; and Appendix B, Environmental Protection Plan, 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-37

Page 1
Page 2
Page 3
Page 5
Page 6
Page 7
Page 8

License NPF-66

Page 1
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Appendix A

5.3-1

Appendix B

Cover page

Insert

License NPF-37

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License NPF-66

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Appendix A

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Appendix A

Cover page



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

CONSTELLATION ENERGY GENERATION, LLC

DOCKET NO. STN 50-454

BYRON STATION, UNIT NO. 1

RENEWED FACILITY OPERATING LICENSE

Renewed License No. NPF-37

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for a renewed license filed by the applicant* complies with the standards and requirements of the Atomic Energy Act of 1954, as amend (the Act), and the Commission's regulations set forth in 10 CFR Chapter I, and all required notifications to other agencies or bodies have been duly made;
 - B. Construction of the Byron Station, Unit No. 1 (the facility) has been substantially completed in conformity with Construction Permit No. CPPR-130 and the application, as amended, the provisions of the Act, and the regulations of the Commission;
 - C. The facility will operate in conformity with the application, as amended, the provisions of the Act, and the regulations of the Commission (except as exempted from compliance in Section 2.D below);
 - D. There is reasonable assurance: (i) that the activities authorized by this renewed operating license 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 set forth in 10 CFR Chapter I (except as exempted from compliance in Section 2.D below);
 - E. Constellation Energy Generation, LLC is technically qualified to engage in the activities authorized by this renewed license in accordance with the Commission's regulations set forth in 10 CFR Chapter I;
 - F. Constellation Energy Generation, LLC has satisfied the applicable provisions of 10 CFR Part 140, "Financial Protection Requirements and Indemnity Agreements," of the Commission's regulations;

* The Nuclear Regulatory Commission approved the transfer of the license from Commonwealth Edison Company to Exelon Generation Company, LLC on August 3, 2000. The Nuclear Regulatory Commission approved a transaction on November 16, 2021, that resulted in Exelon Generation Company, LLC being renamed Constellation Energy Generation, LLC.

Renewed License No. NPF-37
Amendment No. 226

- G. The issuance of this renewed license will not be inimical to the common defense and security or to the health and safety of the public;
 - H. After weighing the environmental, economic, technical, and other benefits of the facility against environmental and other costs and considering available alternatives, the issuance of Renewed Facility Operating License No. NPF-37, subject to the conditions for protection of the environment set forth in the Environmental Protection Plan attached as Appendix B, is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied; and
 - I. The receipt, possession, and use of source, byproduct and special nuclear material as authorized by this renewed license will be in accordance with the Commission's regulations in 10 CFR Parts 30, 40 and 70.
 - J. Actions have been identified and have been or will be taken with respect to (1) managing the effects of aging during the period of extended operation on the functionality of structures and components that have been identified to require review under 10 CFR 54.21(a)(1), and (2) time-limited aging analyses that have been identified to require review under 10 CFR 54.21(c), such that there is reasonable assurance that the activities authorized by this renewed license will continue to be conducted in accordance with the current licensing basis, as defined in 10 CFR 54.3, for the facility, and that any changes made to the facility's current licensing basis in order to comply with 10 CFR 54.29(a) are in accordance with the Act and the Commission's regulations.
2. Facility Operating License No. NPF-37, dated February 14, 1985, as amended, is hereby superseded by Renewed Facility Operating License No. NPF-37, issued to Constellation Energy Generation, LLC (the licensee) to read as follows:
- A. This renewed license applies to the Byron Station, Unit No. 1, a pressurized water nuclear reactor, and associated equipment (the facility), owned by Constellation Energy Generation, LLC. The facility is located in north central Illinois within Rockvale Township, Ogle County, Illinois and is described in the licensee's "Updated Final Safety Analysis Report," as supplemented and amended, and in the licensee's Environmental Report, as supplemented and amended.
 - B. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses Constellation Energy Generation, LLC:
 - (1) Pursuant to Section 103 of the Act and 10 CFR Part 50 to possess, use and operate the facility at the designated location in accordance with the procedures and limitations set forth in this renewed license;

- (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 Updated 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) 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.

C. The 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:

(1) Maximum Power Level

The licensee is authorized to operate the facility at reactor core power levels not in excess of 3645 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. 226 and the Environmental Protection Plan contained in Appendix B, both of which are attached hereto, are hereby incorporated into this renewed license. The licensee shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

(3) Deleted.

(4) Deleted.

- (18) Constellation Energy Generation, LLC shall provide to the Director of the Office of Nuclear Reactor Regulation or the Director of the Office of Nuclear Material Safety and Safeguards, as applicable, a copy of any application, at the time it is filed, to transfer (excluding grants of security interests or liens) from Constellation Energy Generation, LLC to its direct or indirect parent, or to any other affiliated company, facilities for the production, transmission, or distribution of electric energy having a depreciated book value exceeding ten percent (10%) of Constellation Energy Generation, LLC's consolidated net utility plant, as recorded on Constellation Energy Generation, LLC's books of account.
- (19) Deleted.
- (20) Deleted.
- (21) Deleted.
- (22) Mitigation Strategy License Condition

Develop and maintain strategies for addressing large fires and explosions and that include the following key areas:

- (a) Fire fighting response strategy with the following elements:
1. Pre-defined coordinated fire response strategy and guidance
 2. Assessment of mutual aid fire fighting assets
 3. Designated staging areas for equipment and materials
 4. Command and control
 5. Training of response personnel
- (b) Operations to mitigate fuel damage considering the following:
1. Protection and use of personnel assets
 2. Communications
 3. Minimizing fire spread
 4. Procedures for implementing integrated fire response strategy
 5. Identification of readily-available pre-staged equipment
 6. Training on integrated fire response strategy
 7. Spent fuel pool mitigation measures
- (c) Actions to minimize release to include consideration of:
1. Water spray scrubbing
 2. Dose to onsite responders

(23) License Renewal License Conditions

- (a) The information in the UFSAR supplement, submitted pursuant to 10 CFR 54.21(d), as revised during the license renewal application review process, and as supplemented by the Commitments applicable to Byron Unit 1 in Appendix A of the “Safety Evaluation Report Related to the License Renewal of Byron Station, Units 1 and 2, and Braidwood Station, Units 1 and 2” (SER) dated July 2015, is collectively the “License Renewal UFSAR Supplement.” This Supplement is henceforth part of the UFSAR which will be updated in accordance with 10 CFR 50.71(e). As such, the licensee may make changes to the programs and activities applicable to Byron Unit 1 described in this Supplement provided the licensee evaluates such changes pursuant to the criteria set forth in 10 CFR 50.59 and otherwise complies with the requirements in that section.
- (b) This License Renewal UFSAR Supplement, as revised per License Condition 23(a) above, describes certain programs to be implemented and activities to be completed prior to the period of extended operation.
1. The licensee shall implement those new programs and enhancements to existing programs no later than April 30, 2024.
 2. The licensee shall complete those activities as noted in the Commitments applicable to Byron Unit 1 in this Supplement no later than April 30, 2024 or the end of the last refueling outage prior to the period of extended operation, whichever occurs later.
 3. The licensee shall notify the NRC in writing within 30 days after having accomplished item (b)1 above and include the status of those activities that have been or remain to be completed in item (b)2 above.

(24) Adoption of 10 CFR 50.69, “Risk-informed categorization and treatment of structures, systems, and components for nuclear power plants”

Constellation Energy Generation, LLC is approved to implement 10 CFR 50.69 using the processes for categorization of Risk-Informed Safety Class (RISC)-1, RISC-2, RISC-3, and RISC-4 structures, systems, and components (SSCs) using:

Probabilistic Risk Assessment (PRA) models to evaluate risk associated with internal events, including internal flooding, and internal fire; the shutdown safety assessment process to assess shutdown risk; the Arkansas Nuclear One, Unit 2 (ANO-2) passive categorization method to assess passive component risk for

Class 2, Class 3, and non-Code class SSCs and their associated supports; and the results of non-PRA evaluations that are based on the IPEEE Screening Assessment for External Hazards, i.e., seismic margin analysis (SMA) to evaluate seismic risk, and a screening of other external hazards updated using the external hazard screening significance process identified in ASME/ANS PRA Standard RA-Sa-2009; as specified in the license amendment No. 204, dated October 22, 2018.

The licensee will complete the updated implementation items listed in Attachment 1 of Exelon letter to NRC dated September 13, 2018, prior to implementation of 10 CFR 50.69. All issues identified in the attachment will be addressed and any associated changes will be made, focused scope peer reviews will be performed on changes that are PRA upgrades as defined in the PRA standard (ASME/ANS RA-Sa-2009, as endorsed by RG 1.200, Revision 2), and any findings will be resolved and reflected in the PRA of record prior to implementation of the 10 CFR 50.69 categorization process.

Prior NRC approval, under 10 CFR 50.90, is required for a change to the categorization process specified above (e.g., change from a seismic margins approach to a seismic probabilistic risk assessment approach).

- D. The facility requires no exemptions from the requirements of 10 CFR Part 50.
- E. Constellation Energy Generation, LLC shall fully implement and maintain in effect all provisions of the Commission-approved physical security, training and qualifications, 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: "Byron Nuclear Power Station Security Plan, Training and Qualification Plan, and Safeguards Contingency Plan, Revision 3," submitted by letter dated May 17, 2006.

Constellation Energy Generation, LLC shall fully implement and maintain in effect all provisions of the Commission-approved cyber security plan (CSP), including changes made pursuant to the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The CSP was approved by License Amendment No. 175 and modified by License Amendment No. 191.

- F. Deleted

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

- G. The licensee shall have and maintain financial protection of such type and in such amounts as the Commission shall require in accordance with Section 170 of the Atomic Energy Act of 1954, as amended, to cover public liability claims.
- H. This renewed license is effective as of the date of issuance and shall expire at midnight on October 31, 2044.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

William M. Dean, Director
Office of Nuclear Reactor Regulation

Appendices:

1. Appendix A – Technical Specifications
(NUREG-1113)
2. Appendix B – Environmental Protection
Plan
3. Appendix C - Additional Conditions

Date of Issuance: November 19, 2015



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

CONSTELLATION ENERGY GENERATION, LLC

DOCKET NO. STN 50-455

BYRON STATION, UNIT NO. 2

RENEWED FACILITY OPERATING LICENSE

Renewed License No. NPF-66

1. The Nuclear Regulatory Commission (the Commission or the NRC) has found that:
 - A. The application for a renewed license filed by the applicant* complies with the standards and requirements of the Atomic Energy Act of 1954, as amend (the Act), and the Commission's regulations set forth in 10 CFR Chapter I, and all required notifications to other agencies or bodies have been duly made;
 - B. Construction of Byron Station, Unit 2 (the facility) has been substantially completed in conformity with Construction Permit No. CPPR-131 and the application, as amended, the provisions of the Act and the regulations of the Commission;
 - C. The facility will operate in conformity with the application, as amended, the provisions of the Act, and the regulations of the Commission (except as exempted from compliance in Section 2.D. below);
 - D. There is reasonable assurance: (i) that the activities authorized by this renewed operating license 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 set forth in 10 CFR Chapter I (except as exempted from compliance in Section 2.D. below);
 - E. Constellation Energy Generation, LLC is technically qualified to engage in the activities authorized by this renewed license in accordance with the Commission's regulations set forth in 10 CFR Chapter I;
 - F. Constellation Energy Generation, LLC has satisfied the applicable provisions of 10 CFR Part 140, "Financial Protection Requirements and Indemnity Agreements," of the Commission's regulations;

* The Nuclear Regulatory Commission approved the transfer of the license from Commonwealth Edison Company to Exelon Generation Company, LLC on August 3, 2000. The Nuclear Regulatory Commission approved a transaction on November 16, 2021, that resulted in Exelon Generation Company, LLC being renamed Constellation Energy Generation, LLC.

Renewed License No. NPF-66
Amendment No. 226

- G. The issuance of this renewed license will not be inimical to the common defense and security or to the health and safety of the public;
 - H. After weighing the environmental, economic, technical, and other benefits of the facility against environmental and other costs and considering available alternatives, the issuance of Renewed Facility Operating License No. NPF-66, subject to the conditions for protection of the environment set forth in the Environmental Protection Plan attached as Appendix B to Renewed License No. NPF-37, issued November 19, 2015, is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied; and
 - I. The receipt, possession, and use of source, byproduct and special nuclear material as authorized by this renewed license will be in accordance with the Commission's regulations in 10 CFR Parts 30, 40 and 70.
 - J. Actions have been identified and have been or will be taken with respect to (1) managing the effects of aging during the period of extended operation on the functionality of structures and components that have been identified to require review under 10 CFR 54.21(a)(1), and (2) time-limited aging analyses that have been identified to require review under 10 CFR 54.21(c), such that there is reasonable assurance that the activities authorized by this renewed license will continue to be conducted in accordance with the current licensing basis, as defined in 10 CFR 54.3, for the facility, and that any changes made to the facility's current licensing basis in order to comply with 10 CFR 54.29(a) are in accordance with the Act and the Commission's regulations.
2. Facility Operating License No. NPF-66, dated January 30, 1987, as amended, is hereby superseded by Renewed Facility Operating License No. NPF-66, issued to Constellation Energy Generation, LLC (the licensee) to read as follows:
- A. The renewed license applies to the Byron Station, Unit No. 2, a pressurized water reactor, and associated equipment (the facility), owned by Constellation Energy Generation, LLC. The facility is located in north central Illinois within Rockvale Township, Ogle County, Illinois and is described in the licensee's Updated Final Safety Analysis Report, as supplemented and amended, and in the licensee's Environmental Report, as supplemented and amended.
 - B. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses Constellation Energy Generation, LLC:
 - (1) Pursuant to Section 103 of the Act and 10 CFR Part 50 to possess, use and operate the facility at the designated location in accordance with the procedures and limitations set forth in this renewed license;

- (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 Updated 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) 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.

C. The 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:

(1) Maximum Power Level

The licensee is authorized to operate the facility at reactor core power levels not in excess of 3645 megawatts thermal (100 percent rated power) in accordance with the conditions specified herein.

(2) Technical Specifications

The Technical Specifications contained in Appendix A (NUREG-1113), as revised through Amendment No. 226, and the Environmental Protection Plan contained in Appendix B, both of which were attached to Renewed License No. NPF-37, dated November 19, 2015, are hereby incorporated into this renewed license. The licensee shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

(3) Deleted.

(4) Deleted.

(5) Deleted.

(6) Additional Conditions

The Additional Conditions contained in Appendix C, as revised through Amendment No. 198, are hereby incorporated into this renewed license. The licensee shall operate the facility in accordance with the Additional Conditions.

(7) Constellation Energy Generation, LLC shall provide to the Director of the Office of Nuclear Reactor Regulation or the Director of the Office of Nuclear Material Safety and Safeguards, as applicable, a copy of any application, at the time it is filed, to transfer (excluding grants of security interests or liens) from Constellation Energy Generation, LLC to its direct or indirect parent, or to any other affiliated company, facilities for the production, transmission, or distribution of electric energy having a depreciated book value exceeding ten percent (10%) of Constellation Energy Generation, LLC's consolidated net utility plant, as recorded on Constellation Energy Generation, LLC's books of account.

(8) Deleted.

(9) Deleted.

(10) Deleted.

(11) Mitigation Strategy License Condition

Develop and maintain strategies for addressing large fires and explosions and that include the following key areas:

(a) Fire fighting response strategy with the following elements:

1. Pre-defined coordinated fire response strategy and guidance
2. Assessment of mutual aid fire fighting assets
3. Designated staging areas for equipment and materials
4. Command and control
5. Training of response personnel

(b) Operations to mitigate fuel damage considering the following:

1. Protection and use of personnel assets
2. Communications
3. Minimizing fire spread
4. Procedures for implementing integrated fire response strategy
5. Identification of readily-available pre-staged equipment
6. Training on integrated fire response strategy
7. Spent fuel pool mitigation measures

- (c) Actions to minimize release to include consideration of:
 - 1. Water spray scrubbing
 - 2. Dose to onsite responders

(12) License Renewal License Conditions

(a) The information in the UFSAR supplement, submitted pursuant to 10 CFR 54.21(d), as revised during the license renewal application review process, and as supplemented by the Commitments applicable to Byron Unit 2 in Appendix A of the "Safety Evaluation Report Related to the License Renewal of Byron Station, Units 1 and 2, and Braidwood Station, Units 1 and 2" (SER) dated July 2015, is collectively the "License Renewal UFSAR Supplement." This Supplement is henceforth part of the UFSAR which will be updated in accordance with 10 CFR 50.71(e). As such, the licensee may make changes to the programs and activities applicable to Byron Unit 2 described in this Supplement provided the licensee evaluates such changes pursuant to the criteria set forth in 10 CFR 50.59 and otherwise complies with the requirements in that section.

(b) This License Renewal UFSAR Supplement, as revised per License Condition 12(a) above, describes certain programs to be implemented and activities to be completed prior to the period of extended operation.

- 1. The licensee shall implement those new programs and enhancements to existing programs no later than May 6, 2026.
- 2. The licensee shall complete those activities as noted in the Commitments applicable to Byron Unit 2 in this Supplement no later than May 6, 2026, or the end of the last refueling outage prior to the period of extended operation, whichever occurs later.
- 3. The licensee shall notify the NRC in writing within 30 days after having accomplished item (b)1 above and include the status of those activities that have been or remain to be completed in item (b)2 above.

(13) Adoption of 10 CFR 50.69, "Risk-informed categorization and treatment of structures, systems, and components for nuclear power plants"

Constellation Energy Generation, LLC is approved to implement 10 CFR 50.69 using the processes for categorization of Risk-Informed Safety Class (RISC)-1, RISC-2, RISC-3, and RISC-4 structures, systems, and components (SSCs) using:

Probabilistic Risk Assessment (PRA) models to evaluate risk associated with internal events, including internal flooding, and internal fire; the shutdown safety assessment process to assess shutdown risk; the Arkansas Nuclear One, Unit 2 (ANO-2) passive categorization method to assess passive component risk for Class 2, Class 3, and non-Code class SSCs and their associated supports; and the results of non-PRA evaluations that are based on the IPEEE Screening Assessment for External Hazards, i.e., seismic margin analysis (SMA) to evaluate seismic risk, and a screening of other external hazards updated using the external hazard screening significance process identified in ASME/ANS PRA Standard RA-Sa-2009; as specified in the license amendment No. 204, dated October 22, 2018.

The licensee will complete the updated implementation items listed in Attachment 1 of Exelon letter to NRC dated September 13, 2018, prior to implementation of 10 CFR 50.69. All issues identified in the attachment will be addressed and any associated changes will be made, focused scope peer reviews will be performed on changes that are PRA upgrades as defined in the PRA standard (ASME/ANS RA-Sa-2009, as endorsed by RG 1.200, Revision 2), and any findings will be resolved and reflected in the PRA of record prior to implementation of the 10 CFR 50.69 categorization process.

Prior NRC approval, under 10 CFR 50.90, is required for a change to the categorization process specified above (e.g., change from a seismic margins approach to a seismic probabilistic risk assessment approach).

- D. The facility requires no exemptions from the requirements of 10 CFR Part 50.

An exemption was previously granted pursuant to 10 CFR 70.24. The exemption was granted with NRC materials license No. SNM-1916, issued March 4, 1985, and relieved the licensee from the requirement of having a criticality alarm system. Therefore, the licensee is exempted from the criticality alarm system provision of 10 CFR 70.24 so far as this section applies to the storage of fuel assemblies held under this license.

- E. The licensee shall implement and maintain in effect all provisions of the approved fire protection program as described in the licensee's Fire Protection Report and the licensee's letters dated September 23, 1986, October 23, 1986, November 3, 1986, December 12 and 15, 1986, and January 21, 1987, and as approved in the SER dated February 1982 through Supplement No. 8, subject to the following provision:

The licensee may make changes to the approved fire protection program without prior approval of the Commission only if those changes would not adversely affect the ability to achieve and maintain safe shutdown in the event of a fire.

- F. Constellation Energy Generation, LLC shall fully implement and maintain in effect all provisions of the Commission-approved physical security, training and qualifications, 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: "Byron Nuclear Power Station Security Plan, Training and Qualification Plan, and Safeguards Contingency Plan, Revision 3," submitted by letter dated May 17, 2006.

Constellation Energy Generation, LLC shall fully implement and maintain in effect all provisions of the Commission-approved cyber security plan (CSP), including changes made pursuant to the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The CSP was approved by License Amendment No. 175 and modified by License Amendment No. 191.

- G. Deleted
- H. The licensee shall have and maintain financial protection of such type and in such amounts as the Commission shall require in accordance with Section 170 of the Atomic Energy Act of 1954, as amended, to cover public liability claims.
- I. This renewed license is effective as of the date of issuance and shall expire at midnight on November 6, 2046.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

William M. Dean, Director
Office of Nuclear Reactor Regulation

Attachments:

1. Appendix A – Technical Specifications (NUREG-1113)
2. Appendix B – Environmental Protection Plan
3. Appendix C – Additional Conditions

Date of Issuance: November 19, 2015

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

5.0 ADMINISTRATIVE CONTROLS

5.3 Facility Staff Qualifications

- 5.3.1 Each member of the facility staff shall meet or exceed the minimum qualifications referenced for comparable positions as specified in the Constellation Energy Generation, LLC Quality Assurance Topical Report.

APPENDIX B
TO FACILITY OPERATING LICENSE NOS. NPF-37 & NPF-66
CONSTELLATION ENERGY GENERATION, LLC
BYRON STATION UNITS 1 & 2
DOCKET NOS. 50-454 AND 50-455

ENVIRONMENTAL PROTECTION PLAN
(NON-RADIOLOGICAL)



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

CALVERT CLIFFS NUCLEAR POWER PLANT, LLC

CONSTELLATION ENERGY GENERATION, LLC

DOCKET NO. 50-317

CALVERT CLIFFS NUCLEAR POWER PLANT, UNIT 1

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 343
Renewed License No. DPR-53

1. The U.S. Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Exelon Generation Company, LLC dated February 25, 2021, as supplemented by letters dated March 25, June 11, September 16, and September 29, 2021, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, Renewed Facility Operating License No. DPR-53 is hereby amended as indicated in the attachment to this license amendment.
3. This license amendment is effective as of the date of its issuance and shall be implemented within 15 days of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Bo M. Pham, Director
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Renewed Facility
Operating License

Date of Issuance: February 1, 2022



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

CALVERT CLIFFS NUCLEAR POWER PLANT, LLC

CONSTELLATION ENERGY GENERATION, LLC

DOCKET NO. 50-318

CALVERT CLIFFS NUCLEAR POWER PLANT, UNIT 2

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 321
Renewed License No. DPR-69

1. The U.S. Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Exelon Generation Company, LLC dated February 25, 2021, as supplemented by letters dated March 25, June 11, September 16, and September 29, 2021, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, Renewed Facility Operating License No. DPR-69 is hereby amended as indicated in the attachment to this license amendment.
3. This license amendment is effective as of the date of its issuance and shall be implemented within 15 days of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Bo M. Pham, Director
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Renewed Facility
Operating License

Date of Issuance: February 1, 2022

ATTACHMENT TO LICENSE AMENDMENT NOS. 343 AND 321

RENEWED FACILITY OPERATING LICENSE NOS. DPR-53 AND DPR-69

CALVERT CLIFFS NUCLEAR POWER PLANT, UNITS 1 AND 2

DOCKET NOS. 50-317 AND 50-318

Replace the following pages of the Renewed Facility Operating Licenses; Appendix A, Technical Specifications; and Appendix C, Additional Conditions, 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-53
Pages 1 through 8

Appendix C to DPR-53
Page 1
Page 2
Page 8
Page 9
Page 10
Page 11

License DPR-69
Pages 1 through 8

Appendix C to DPR-69
Page 1
Page 2
Page 8
Page 9
Page 10
Page 11

Appendix A
5.3-1

Insert

License DPR-53
Pages 1 through 8

Appendix C to DPR-53
Page 1
Page 2
Page 8
Page 9
Page 10
Page 11

License DPR-69
Pages 1 through 9

Appendix C to DPR-69
Page 1
Page 2
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Page 10
Page 11

Appendix A
5.3-1



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

RENEWED FACILITY OPERATING LICENSE

CALVERT CLIFFS NUCLEAR POWER PLANT, UNIT 1

CALVERT CLIFFS NUCLEAR POWER PLANT, LLC

CONSTELLATION ENERGY GENERATION, LLC

DOCKET NO. 50-317

Renewed License No. DPR-53

1. The U.S. Nuclear Regulatory Commission (Commission), having previously made the findings set forth in License No. DPR-53 issued on July 31, 1974, has now found that:
 - A. The application to Renewed License No. DPR-53 filed by Baltimore Gas and Electric Company* 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, and all required notifications to other agencies or bodies have been duly made;
 - B. Actions have been identified and have been or will be taken with respect to (1) managing the effects of aging during the period of extended operation on the functionality of structures and components that have been identified to require review under 10 CFR 54.21(a)(1), and (2) time-limited aging analyses that have been identified to require review under 10 CFR 54.21(c), such that there is reasonable assurance that the activities authorized by the renewed license will continue to be conducted in accordance with the current licensing basis, as defined in 10 CFR 54.3, for the Calvert Cliffs Nuclear Power Plant, Unit 1 (facility), and that any changes made to the plant's current licensing basis in order to comply with 10 CFR 54.29(a) are in accord with the Act and the Commission's regulations;
 - C. There is reasonable assurance: (i) that the activities authorized by this renewed license can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the applicable regulations set forth in 10 CFR Chapter I, except as exempted from compliance;

* By Order dated October 9, 2009, as superseded by Order dated October 30, 2009, the transfer of this license to Calvert Cliffs Nuclear Power Plant, LLC, was approved. By Order dated March 24, 2014, the transfer of the operating authority under this license to Exelon Generation Company, LLC was approved. By Order dated November 16, 2021, a transaction was approved that resulted in Exelon Generation Company, LLC being renamed Constellation Energy Generation, LLC. Unless otherwise noted, references to "the licensee" are to Constellation Energy Generation, LLC as the operating licensee.

- D. The Calvert Cliffs Nuclear Power Plant, LLC and Constellation Energy Generation, LLC** have satisfied the applicable provisions of 10 CFR Part 140, “Financial Protection Requirements and Indemnity Agreements”;
 - E. The renewal of this license will not be inimical to the common defense and security or the health and safety of the public; and
 - F. After weighing the environmental, economic, technical, and other benefits of the facility against environmental and other costs, and considering available alternatives, the renewal of this license is in accordance with 10 CFR Part 51 and all applicable requirements have been satisfied.
2. On the basis of the foregoing findings regarding this facility, Facility Operating License No. DPR-53, issued on July 31, 1974, is superseded by Renewed Facility Operating License No. DPR-53, which is hereby issued to Calvert Cliffs Nuclear Power Plant, LLC and Constellation Energy Generation, LLC to read as follows:
- A. This license applies to the Calvert Cliffs Nuclear Power Plant, Unit 1, a pressurized water reactor and associated equipment (the facility), owned by Calvert Cliffs Nuclear Power Plant, LLC. The facility is located in Calvert County, Maryland, and is described in the Final Safety Analysis Report (FSAR), as supplemented and amended, and the Environmental Report, as supplemented and amended.
 - B. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses:
 - (1) Pursuant to Section 104b of the Act and 10 CFR Part 50, “Domestic Licensing of Production and Utilization Facilities,” (a) Calvert Cliffs Nuclear Power Plant, LLC to possess, and (b) Constellation Energy Generation, LLC to possess, use, and operate the facility at the designated location in Calvert County, Maryland, in accordance with the procedures and limitations set forth in this license;
 - (2) Constellation Energy Generation, LLC, 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, and described in the Final Safety Analysis Report, as supplemented and amended;
 - (3) Constellation Energy Generation, 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;

** Constellation Energy Generation, LLC is authorized to act for Calvert Cliffs Nuclear Power Plant, LLC and has exclusive responsibility and control over the physical possession, operation, and maintenance of the facility.

- (4) Constellation Energy Generation, 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, and special nuclear material without restriction to chemical or physical form, for sample analysis or instrument calibration or associated with radioactive apparatus or components; and
 - (5) Constellation Energy Generation, LLC, pursuant to the Act and 10 CFR Parts 30 and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of the facility.
- C. This license is deemed to contain and is subject to the conditions set forth in 10 CFR Chapter I and is subject to all applicable provisions of the Act, and the rules, regulations, and orders of the Commission, now or hereafter applicable; and is subject to the additional conditions specified and incorporated below:
- (1) Maximum Power Level

Constellation Energy Generation, LLC is authorized to operate the facility at steady-state reactor core power levels not in excess of 2737 megawatts-thermal in accordance with the conditions specified herein.
 - (2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 343, are hereby incorporated into this license. Constellation Energy Generation, LLC shall operate the facility in accordance with the Technical Specifications.

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

The Additional Conditions contained in Appendix C as revised through Amendment No. 343 are hereby incorporated into this license. Constellation Energy Generation, LLC shall operate the facility in accordance with the Additional Conditions.

(4) Secondary Water Chemistry Monitoring Program

Constellation Energy Generation, LLC shall implement a secondary water chemistry monitoring program to inhibit steam generator tube degradation. This program shall include:

- a. Identification of a sampling schedule for the critical parameters and control points for these parameters;
- b. Identification of the procedures used to quantify parameters that are critical to control points;
- c. Identification of process sampling points;
- d. Procedure for recording and management of data;
- e. Procedures defining corrective actions for off control point chemistry conditions; and
- f. A procedure identifying the authority responsible for the interpretation of the data and the sequence and timing of administrative events required to initiate corrective action.

(5) Mitigation Strategy

Constellation Energy Generation, LLC shall develop and maintain strategies for addressing large fires and explosions that include the following key areas:

- (a) Fire fighting response strategy with the following elements:
 1. Pre-defined coordinated fire response strategy and guidance
 2. Assessment of mutual aid fire fighting assets
 3. Designated staging areas for equipment and materials
 4. Command and control
 5. Training of response personnel
- (b) Operations to mitigate fuel damage considering the following:
 1. Protection and use of personnel assets
 2. Communications
 3. Minimizing fire spread
 4. Procedures for implementing integrated fire response strategy
 5. Identification of readily available pre-staged equipment
 6. Training on integrated fire response strategy
 7. Spent fuel pool mitigation measures

(c) Actions to minimize release to include consideration of:

1. Water spray scrubbing
2. Dose to onsite responders

(6) Risk-Informed Categorization and Treatment of Structures, Systems, and Components

Constellation Energy Generation, LLC is approved to implement 10 CFR 50.69 using the processes for categorization of Risk-Informed Safety Class (RISC)-1, RISC-2, RISC-3, and RISC-4 Structures, Systems, and Components (SSCs) using: Probabilistic Risk Assessment (PRA) models to evaluate risk associated with internal events, including internal flooding, and internal fire; the shutdown safety assessment process to assess shutdown risk; the Arkansas Nuclear One, Unit 2 (ANO-2) passive categorization method to assess passive component risk for Class 2 and Class 3 and non-Class SSCs and their associated supports; the results of the non-PRA evaluations that are based on the IPEEE Screening Assessment for External Hazards updated using the external hazard screening significance process identified in ASME/ANS PRA Standard RA-Sa-2009 for other external hazards except seismic; and the alternative seismic approach as described in Exelon's original submittal letter dated November 28, 2018, and all its subsequent associated supplements as specified in License Amendment No. 332 dated February 28, 2020.

Prior NRC approval, under 10 CFR 50.90, is required for a change to the categorization process specified above (e.g., change from a seismic margins approach to a seismic probabilistic risk assessment approach).

(7) Constellation Energy Generation, LLC shall provide to the Director of the Office of Nuclear Reactor Regulation or the Director of the Office of Nuclear Material Safety and Safeguards, as applicable, a copy of any application, at the time it is filed, to transfer (excluding grants of security interests or liens) from Constellation Energy Generation, LLC to its direct or indirect parent, or to any other affiliated company, facilities for the production, transmission, or distribution of electric energy having a depreciated book value exceeding ten percent (10%) of Constellation Energy Generation, LLC's consolidated net utility plant, as recorded on Constellation Energy Generation, LLC's books of account.

D. Constellation Energy Generation, LLC shall fully implement and maintain in effect all provisions of the Commission-approved physical security, training and qualification, and safeguards contingency plans, including amendments made pursuant to provisions of the Miscellaneous Amendments and Search Requirements revisions to 10 CFR 73.55 (51 FR 27817 and 27822) and to the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The combined set of plans, which contain Safeguards Information protected under 10 CFR 73.21, is entitled: "Calvert Cliffs Nuclear Power Plant Security Plan, Training and Qualification Plan, and Safeguards Contingency Plan, Revision 1" submitted May 19, 2006.

Constellation Energy Generation, LLC shall fully implement and maintain in effect all provisions of the Commission-approved cyber security plan (CSP), including changes made pursuant to the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The licensee's CSP was approved by License Amendment No. 298 and modified by License Amendment No. 312.

- E. Constellation Energy Generation, LLC shall implement and maintain in effect all provisions of the approved fire protection program that comply with 10 CFR 50.48(a) and 10 CFR 50.48(c), as specified in the license amendment request dated September 24, 2013; as supplemented by letters dated February 9, 2015, March 11, 2015, April 13, 2015, July 6, 2015, August 13, 2015, February 24, 2016, and April 22, 2016, and as approved in the NRC safety evaluation dated August 30, 2016. Except where NRC approval for changes or deviations is required by 10 CFR 50.48(c), and provided no other regulation, technical specification, license condition or requirement would require prior NRC approval, the licensee may make changes to the fire protection program without prior approval of the Commission if those changes satisfy the provisions set forth in 10 CFR 50.48(a) and 10 CFR 50.48(c), and the criteria listed below are satisfied.

(1) Risk-Informed Changes That May Be Made Without Prior NRC Approval

A risk assessment of the change must demonstrate that the acceptance criteria below are met. The risk assessment approach, methods, and data shall be acceptable to the NRC and shall be appropriate for the nature and scope of the change being evaluated; be based on the as-built, as-operated, and maintained plant; and reflect the operating experience at the plant. Acceptable methods to assess the risk of the change may include methods that have been used in the peer-reviewed fire PRA model, methods that have been approved by NRC through a plant-specific license amendment, NRC approval of generic methods specifically for use in NFPA 805 risk assessments, or methods that have been demonstrated to bound the risk impact.

- (a) Prior NRC review and approval is not required for changes that clearly result in a decrease in risk. The proposed change must also be consistent with the defense-in-depth philosophy and must maintain sufficient safety margins. The change may be implemented following completion of the plant change evaluation.
- (b) Prior NRC review and approval is not required for individual changes that result in a risk increase less than $1 \times 10^{-7}/\text{yr}$ for CDF and less than $1 \times 10^{-8}/\text{yr}$ for LERF. The proposed change must also be consistent with the defense-in-depth philosophy and must maintain sufficient safety margins. The change may be implemented following completion of the plant change evaluation.

(2) Other Changes that May Be Made Without Prior NRC Approval

(a) Changes to NFPA 805, Chapter 3, Fundamental Fire Protection Program

Prior NRC review and approval are not required for changes to the NFPA 805, Chapter 3, fundamental fire protection program elements and design requirements for which an engineering evaluation demonstrates that the alternative to the Chapter 3 element is functionally equivalent. The licensee may use an engineering evaluation to demonstrate that a change to an NFPA 805, Chapter 3, element is functionally equivalent to the corresponding technical requirement. A qualified fire protection engineer shall perform the engineering evaluation and conclude that the change has not affected the functionality of the component, system, procedure, or physical arrangement, using a relevant technical requirement or standard.

The licensee may use an engineering evaluation to demonstrate that changes to certain NFPA 805, Chapter 3, elements are acceptable because the alternative is “adequate for the hazard.” Prior NRC review and approval would not be required for alternatives to four specific sections of NFPA 805, Chapter 3, for which an engineering evaluation demonstrates that the alternative to the Chapter 3 element is adequate for the hazard. A qualified fire protection engineer shall perform the engineering evaluation and conclude that the change has not affected the functionality of the component, system, procedure, or physical arrangement, using a relevant technical requirement or standard. The four specific sections of NFPA 805, Chapter 3, are as follows:

- “Fire Alarm and Detection Systems” (Section 3.8);
- “Automatic and Manual Water-Based Fire Suppression Systems” (Section 3.9);
- “Gaseous Fire Suppression Systems” (Section 3.10); and,
- “Passive Fire Protection Features” (Section 3.11)

This license condition does not apply to any demonstration of equivalency under Section 1.7 of NFPA 805.

(b) Fire Protection Program Changes that Have No More than Minimal Risk Impact

Prior NRC review and approval are not required for changes to the licensee's fire protection program that have been demonstrated to have no more than a minimal risk impact. The licensee may use its screening process as approved in the NRC safety evaluation dated August 30, 2016, to determine that certain fire protection program changes meet the minimal criterion. The licensee shall ensure that fire protection defense-in-depth and safety margins are maintained when changes are made to the fire protection program.

- F. At the time of the next scheduled update to the FSAR required pursuant to 10 CFR 50.71(e)(4) following the issuance of this renewed license, the licensee shall update the FSAR to include the FSAR supplement submitted pursuant to 10 CFR 54.21(d), as amended and supplemented by the program descriptions in Appendix E to the Safety Evaluation Report, NUREG-1705. Until that FSAR update is complete, the licensee may make changes to the programs described in Appendix E without prior Commission approval, provided that the licensee evaluates each such change pursuant to the criteria set forth in 10 CFR 50.59 and otherwise complies with the requirements in that section.
- G. Any future actions listed in Appendix E to the Safety Evaluation Report, NUREG-1705, shall be included in the FSAR. The licensee shall complete these actions by July 31, 2014, except for the volumetric inspections of the control element drive mechanisms, which must be completed no later than 2029 for Unit 1 (Appendix E, Item 65).
- H. This renewed license is effective as of the date of issuance and shall expire at midnight on July 31, 2034.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

Samuel J. Collins, Director
Office of Nuclear Reactor Regulation

Attachments:

Appendix A – Technical Specifications
Appendix B – Environmental Protection Plan (non-radiological) Technical Specifications
Appendix C – Additional Conditions

Date of Issuance: March 23, 2000

Appendix C

Additional Conditions

Facility Operating License No. DPR-53

Constellation Energy Generation, LLC (the licensee) and Calvert Cliffs Nuclear Power Plant, LLC (CCNPP, LLC or Company) shall comply with the following conditions on the schedule noted below:

<u>Amendment Number</u>	<u>Additional Condition</u>	<u>Implementation Date</u>
227	Baltimore Gas and Electric Company (BGE) is authorized to relocate certain Technical Specification requirements to licensee-controlled documents. Implementation of this Amendment shall include the relocation of these requirements to the appropriate documents as described in the licensee's application dated December 4, 1996, as supplemented by letters dated March 27, June 9, June 18, July 21, August 14, August 19, September 10, October 6, October 20, October 23, November 5, 1997, and January 12, January 28, and March 16, 1998, evaluated in the NRC staff's Safety Evaluation enclosed with this amendment.	This amendment is effective immediately and shall be implemented by August 31, 1998.
228	BGE is authorized to incorporate in the UFSAR certain changes regarding Main Steam Line Break, Steam Generator Tube Rupture, Seized Rotor, and Boron Dilution Analyses.	The updated UFSAR shall be implemented within 6 months after restart from the spring 1998 refueling outage.
237	The decommissioning trust agreement for Calvert Cliffs, Unit 1 at the time the license transfer to the Company from BGE is effected, is subject to the following: (a) The decommissioning trust agreement must be in a form acceptable to the NRC.	To be implemented at time the license transfer to the Company from BGE is effected.

Appendix C (Cont'd)

Additional Conditions

Facility Operating License No. DPR-53

<u>Amendment Number</u>	<u>Additional Condition</u>	<u>Implementation Date</u>
	(b) With respect to the decommissioning trust funds, investments in the securities or other obligations of Constellation Energy Corporation or its affiliates, successors, or assigns shall be prohibited. Except for investments tied to market indexes or other non-nuclear-sector mutual funds, investments in any entity owning one or more nuclear power plants are prohibited.	
	(c) The decommissioning trust agreement must provide that no disbursements or payments from the trust shall be made by the trustee until the trustee has first given the NRC 30-days prior written notice of payment. The decommissioning trust agreement shall further contain a provision that no disbursements or payments from the trust shall be made if the trustee receives prior written notice of objection from the Director, Office of Nuclear Reactor Regulation.	
	(d) The decommissioning trust agreement must provide that the agreement cannot be amended in any material respect without 30-days prior written notification to the Director, Office of Nuclear Reactor Regulation.	

Appendix C (Cont'd)

Additional Conditions

Facility Operating License No. DPR-53

<u>Amendment No.</u>	<u>Additional Condition</u>	<u>Implementation Date</u>
343	1) Deleted	No later than the closing date of the transaction approved on November 16, 2021.

Appendix C (Cont'd)

Additional Conditions

Facility Operating License No. DPR-53

<u>Amendment No.</u>	<u>Additional Condition</u>	<u>Implementation Date</u>
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- | | | |
|--|--|--|
| | <p>2) Constellation Energy Generation, LLC shall, no later than the date the closing of the transaction approved on November 16, 2021, occurs, enter into a Support Agreement of approximately \$126 million with CCNPP, LLC. Calvert Cliffs Nuclear Power Plant, LLC shall not take any action to cause Constellation Energy Generation, LLC, or its successors and assigns, to void, cancel, or materially modify the Constellation Energy Generation, LLC Support Agreement or cause it to fail to perform, or impair its performance under the Constellation Energy Generation, LLC Support Agreement, without the prior written consent of the NRC. The Constellation Energy Generation, LLC Support Agreement may not be amended or modified without 30 days prior written notice to the Director of the Office of Nuclear Reactor Regulation or their designee. An executed copy of the Constellation Energy Generation, LLC Support Agreement shall be submitted to the NRC no later than 30 days after the completion of the proposed transaction. Constellation Energy Generation, LLC shall inform the NRC in writing no later than 14 days after any funds are provided to or for CCNPP, LLC under the Constellation Energy Generation, LLC Support Agreement.</p> | |
|--|--|--|

Appendix C (Cont'd)

Additional Conditions

Facility Operating License No. DPR-53

<u>Amendment No.</u>	<u>Additional Condition</u>	<u>Implementation Date</u>
	3) Deleted.	
	4) Within 14 days of the closing of the transaction approved on November 16, 2021, Constellation Energy Generation, LLC shall submit to the NRC the Nuclear Operating Services Agreement reflecting the terms set forth in the application dated February 25, 2021. Section 7.1 of the Nuclear Operating Services Agreement may not be modified in any material respect related to financial arrangements that would adversely impact the ability of the licensee to fund safety-related activities authorized by the license without the prior written consent of the Director of the Office of Nuclear Reactor Regulation.	
	5) Deleted	
	6) Deleted	

Appendix C (Cont'd)

Additional Conditions

Facility Operating License No. DPR-53

<u>Amendment No.</u>	<u>Additional Condition</u>	<u>Implementation Date</u>
	7) Deleted	
	8) Deleted	
	9) Deleted	



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

RENEWED FACILITY OPERATING LICENSE

CALVERT CLIFFS NUCLEAR POWER PLANT, UNIT 2

CALVERT CLIFFS NUCLEAR POWER PLANT, LLC

CONSTELLATION ENERGY GENERATION, LLC

DOCKET NO. 50-318

Renewed License No. DPR-69

1. The U.S. Nuclear Regulatory Commission (Commission), having previously made the findings set forth in License No. DPR-69 issued on November 30, 1976, has now found that:
 - A. The application to Renewed License No. DPR-69 filed by Baltimore Gas and Electric Company* 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, and all required notifications to other agencies or bodies have been duly made;
 - B. Actions have been identified and have been or will be taken with respect to (1) managing the effects of aging during the period of extended operation on the functionality of structures and components that have been identified to require review under 10 CFR 54.21(a)(1), and (2) time-limited aging analyses that have been identified to require review under 10 CFR 54.21(c), such that there is reasonable assurance that the activities authorized by the renewed license will continue to be conducted in accordance with the current licensing basis, as defined in 10 CFR 54.3, for the Calvert Cliffs Nuclear Power Plant, Unit 2 (facility), and that any changes made to the plant's current licensing basis in order to comply with 10 CFR 54.29(a) are in accord with the Act and the Commission's regulations;
 - C. There is reasonable assurance: (i) that the activities authorized by this renewed license can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the applicable regulations set forth in 10 CFR Chapter I, except as exempted from compliance;

* By Order dated October 9, 2009, as superseded by Order dated October 30, 2009, the transfer of this license to Calvert Cliffs Nuclear Power Plant, LLC, was approved. By Order dated March 24, 2014, the transfer of the operating authority under this license to Exelon Generation Company, LLC was approved. By Order dated November 16, 2021, a transaction was approved that resulted in Exelon Generation Company, LLC being renamed Constellation Energy Generation, LLC. Unless otherwise noted, references to "the licensee" are to Constellation Energy Generation, LLC as the operating licensee.

- D. The Calvert Cliffs Nuclear Power Plant, LLC and Constellation Energy Generation, LLC** have satisfied the applicable provisions of 10 CFR Part 140, “Financial Protection Requirements and Indemnity Agreements”;
 - E. The renewal of this license will not be inimical to the common defense and security or the health and safety of the public; and
 - F. After weighing the environmental, economic, technical, and other benefits of the facility against environmental and other costs, and considering available alternatives, the renewal of this license is in accordance with 10 CFR Part 51 and all applicable requirements have been satisfied.
2. On the basis of the foregoing findings regarding this facility, Facility Operating License No. DPR-69, issued on November 30, 1976, is superseded by Renewed Facility Operating License No. DPR-69, which is hereby issued to Calvert Cliffs Nuclear Power Plant, LLC and Constellation Energy Generation, LLC to read as follows:
- A. This license applies to the Calvert Cliffs Nuclear Power Plant, Unit 2, a pressurized water reactor and associated equipment (the facility), owned by Calvert Cliffs Nuclear Power Plant, LLC. The facility is located in Calvert County, Maryland, and is described in the Final Safety Analysis Report (FSAR), as supplemented and amended, and the Environmental Report, as supplemented and amended.
 - B. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses:
 - (1) Pursuant to Section 104b of the Act and 10 CFR Part 50, “Domestic Licensing of Production and Utilization Facilities,” (a) Calvert Cliffs Nuclear Power Plant, LLC to possess, and (b) Constellation Energy Generation, LLC to possess, use, and operate the facility at the designated location in Calvert County, Maryland, in accordance with the procedures and limitations set forth in this license;
 - (2) Constellation Energy Generation, LLC, 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, and described in the Final Safety Analysis Report, as supplemented and amended;
 - (3) Constellation Energy Generation, 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;

** Constellation Energy Generation, LLC is authorized to act for Calvert Cliffs Nuclear Power Plant, LLC and has exclusive responsibility and control over the physical possession, operation, and maintenance of the facility.

- (4) Constellation Energy Generation, 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, and special nuclear material without restriction to chemical or physical form, for sample analysis or instrument calibration or associated with radioactive apparatus or components; and
 - (5) Constellation Energy Generation, LLC, pursuant to the Act and 10 CFR Parts 30 and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of the facility.
- C. This license is deemed to contain and is subject to the conditions set forth in 10 CFR Chapter I and is subject to all applicable provisions of the Act, and the rules, regulations, and orders of the Commission, now or hereafter applicable; and is subject to the additional conditions specified and incorporated below:
- (1) Maximum Power Level

Constellation Energy Generation, LLC is authorized to operate the facility at steady-state reactor core power levels not in excess of 2737 megawatts-thermal in accordance with the conditions specified herein.
 - (2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 321, are hereby incorporated into this license. The licensee shall operate the facility in accordance with the Technical Specifications.

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

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

(4) Environmental Monitoring Program

If harmful effects or evidence of irreversible damage are detected by the biological monitoring program, hydrological monitoring program, and the radiological monitoring program specified in the Appendix B Technical Specifications, Constellation Energy Generation, LLC (the licensee) will provide to the staff a detailed analysis of the problem and a program of remedial action to be taken to eliminate or significantly reduce the detrimental effects or damage.

(5) Additional Conditions

The Additional Conditions contained in Appendix C as revised through Amendment No. 321 are hereby incorporated into this license. Constellation Energy Generation, LLC shall operate the facility in accordance with the Additional Conditions.

(6) Secondary Water Chemistry Monitoring Program

Constellation Energy Generation, LLC shall implement a secondary water chemistry monitoring program to inhibit steam generator tube degradation. This program shall include:

- a. Identification of a sampling schedule for the critical parameters and control points for these parameters;
- b. Identification of the procedures used to quantify parameters that are critical to control points;
- c. Identification of process sampling points;
- d. Procedure for recording and management of data;
- e. Procedures defining corrective actions for off control point chemistry conditions; and
- f. A procedure identifying the authority responsible for the interpretation of the data and the sequence and timing of administrative events required to initiate corrective action.

(7) Mitigation Strategy

Constellation Energy Generation, LLC shall develop and maintain strategies for addressing large fires and explosions that include the following key areas:

(a) Fire fighting response strategy with the following elements:

1. Pre-defined coordinated fire response strategy and guidance
2. Assessment of mutual aid fire fighting assets
3. Designated staging areas for equipment and materials
4. Command and control
5. Training of response personnel

(b) Operations to mitigate fuel damage considering the following:

1. Protection and use of personnel assets
2. Communications
3. Minimizing fire spread
4. Procedures for implementing integrated fire response strategy
5. Identification of readily available pre-staged equipment
6. Training on integrated fire response strategy
7. Spent fuel pool mitigation measures

(c) Actions to minimize release to include consideration of:

1. Water spray scrubbing
2. Dose to onsite responders

(8) Risk-Informed Categorization and Treatment of Structures, Systems, and Components

Constellation Energy Generation, LLC is approved to implement 10 CFR 50.69 using the processes for categorization of Risk-Informed Safety Class (RISC)-1, RISC-2, RISC-3, and RISC-4 Structures, Systems, and Components (SSCs) using: Probabilistic Risk Assessment (PRA) models to evaluate risk associated with internal events, including internal flooding, and internal fire; the shutdown safety assessment process to assess shutdown risk; the Arkansas Nuclear One, Unit 2 (ANO-2) passive categorization method to assess passive component risk for Class 2 and Class 3 and non-Class SSCs and their associated supports; the results of the non-PRA evaluations that are based on the IPEEE Screening Assessment for External Hazards updated using the external hazard screening significance process identified in ASME/ANS PRA Standard RA-Sa-2009 for other external hazards except seismic; and the alternative seismic approach as described in Exelon's original submittal letter dated November 28, 2018, and all its subsequent associated supplements as specified in License Amendment No. 310 dated February 28, 2020.

Prior NRC approval, under 10 CFR 50.90, is required for a change to the categorization process specified above (e.g., change from a seismic margins approach to a seismic probabilistic risk assessment approach).

- (9) Constellation Energy Generation, LLC shall provide to the Director of the Office of Nuclear Reactor Regulation or the Director of the Office of Nuclear Material Safety and Safeguards, as applicable, a copy of any application, at the time it is filed, to transfer (excluding grants of security interests or liens) from Constellation Energy Generation, LLC to its direct or indirect parent, or to any other affiliated company, facilities for the production, transmission, or distribution of electric energy having a depreciated book value exceeding ten percent (10%) of Constellation Energy Generation, LLC's consolidated net utility plant, as recorded on Constellation Energy Generation, LLC's books of account.

- D. Constellation Energy Generation, LLC shall fully implement and maintain in effect all provisions of the Commission-approved physical security, training and qualification, and safeguards contingency plans, including amendments made pursuant to 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 plans, which contain Safeguards Information protected under 10 CFR 73.21, is entitled: "Calvert Cliffs Nuclear Power Plant Security Plan, Training and Qualification Plan, and Safeguards Contingency Plan, Revision 1" submitted dated May 19, 2006.

Constellation Energy Generation, LLC shall fully implement and maintain in effect all provisions of the Commission-approved cyber security plan (CSP), including changes made pursuant to the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The licensee's CSP was approved by License Amendment No. 275 and modified by License Amendment No. 290.

- E. Constellation Energy Generation, LLC shall implement and maintain in effect all provisions of the approved fire protection program that comply with 10 CFR 50.48(a) and 10 CFR 50.48(c), as specified in the license amendment request dated September 24, 2013; as supplemented by letters dated February 9, 2015, March 11, 2015, April 13, 2015, July 6, 2015, August 13, 2015, February 24, 2016, and April 22, 2016, and as approved in the NRC safety evaluation dated August 30, 2016. Except where NRC approval for changes or deviations is required by 10 CFR 50.48(c), and provided no other regulation, technical specification, license condition or requirement would require prior NRC approval, the licensee may make changes to the fire protection program without prior approval of the Commission if those changes satisfy the provisions set forth in 10 CFR 50.48(a) and 10 CFR 50.48(c), and the criteria listed below are satisfied.

(1) Risk-Informed Changes That May Be Made Without Prior NRC Approval

A risk assessment of the change must demonstrate that the acceptance criteria below are met. The risk assessment approach, methods, and data shall be acceptable to the NRC and shall be appropriate for the nature and scope of the change being evaluated; be based on the as-built, as-operated, and maintained plant; and reflect the operating experience at the plant. Acceptable methods to assess the risk of the change may include methods that have been used in the peer-reviewed fire PRA model, methods that have been approved by NRC through a plant-specific license amendment, NRC approval of generic methods specifically for use in NFPA 805 risk assessments, or methods that have been demonstrated to bound the risk impact.

- (a) Prior NRC review and approval is not required for changes that clearly result in a decrease in risk. The proposed change must also be consistent with the defense-in-depth philosophy and must maintain sufficient safety margins. The change may be implemented following completion of the plant change evaluation.
- (b) Prior NRC review and approval is not required for individual changes that result in a risk increase less than $1 \times 10^{-7}/\text{yr}$ for CDF and less than $1 \times 10^{-8}/\text{yr}$ for LERF. The proposed change must also be consistent with the defense-in-depth philosophy and must maintain sufficient safety margins. The change may be implemented following completion of the plant change evaluation.

(2) Other Changes that May Be Made Without Prior NRC Approval

- (a) Changes to NFPA 805, Chapter 3, Fundamental Fire Protection Program

Prior NRC review and approval are not required for changes to the NFPA 805, Chapter 3, fundamental fire protection program elements and design requirements for which an engineering element is functionally equivalent. The licensee may use an engineering evaluation to demonstrate that a change to an NFPA 805, Chapter 3, element is functionally equivalent to the corresponding technical requirement. A qualified fire protection engineer shall perform the engineering evaluation and conclude that the change has not affected the functionality of the component, system, procedure, or physical arrangement, using a relevant technical requirement or standard.

The licensee may use an engineering evaluation to demonstrate that changes to certain NFPA 805, Chapter 3, elements are acceptable because the alternative is “adequate for the hazard.” Prior NRC review and approval would not be required for alternatives to four specific sections of NFPA 805, Chapter 3, for which an engineering evaluation demonstrates that the alternative to the Chapter 3 element is adequate for the hazard. A qualified fire protection engineer shall perform the engineering evaluation and conclude that the change has not affected the functionality of the component, system, procedure, or physical arrangement, using a relevant technical requirement or standard. The four specific sections of NFPA 805, Chapter 3, are as follows:

- “Fire Alarm and Detection Systems” (Section 3.8);
- “Automatic and Manual Water-Based Fire Suppression Systems” (Section 3.9);
- “Gaseous Fire Suppression Systems” (Section 3.10); and,
- “Passive Fire Protection Features” (Section 3.11)

This license condition does not apply to any demonstration of equivalency under Section 1.7 of NFPA 805.

(b) Fire Protection Program Changes that Have No More than Minimal Risk Impact

Prior NRC review and approval are not required for changes to the licensee’s fire protection program that have been demonstrated to have no more than a minimal risk impact. The licensee may use its screening process as approved in the NRC safety evaluation dated August 30, 2016, to determine that certain fire protection program changes meet the minimal criterion. The licensee shall ensure that fire protection defense-in-depth and safety margins are maintained when changes are made to the fire protection program.

- F. At the time of the next scheduled update to the FSAR required pursuant to 10 CFR 50.71(e)(4) following the issuance of this renewed license, the licensee shall update the FSAR to include the FSAR supplement submitted pursuant to 10 CFR 54.21(d), as amended and supplemented by the program descriptions in Appendix E to the Safety Evaluation Report, NUREG-1705. Until that FSAR update is complete, the licensee may make changes to the programs described in Appendix E without prior Commission approval, provided that the licensee evaluates each such change pursuant to the criteria set forth in 10 CFR 50.59 and otherwise complies with the requirements in that section.
- G. Any future actions listed in Appendix E to the Safety Evaluation Report, NUREG-1705, shall be included in the FSAR. The licensee shall complete these actions by August 13, 2016.

- H. This renewed license is effective as of the date of issuance and shall expire at midnight on August 13, 2036.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

Samuel J. Collins, Director
Office of Nuclear Reactor Regulation

Attachments:

Appendix A – Technical Specifications
Appendix B – Environmental Protection Plan (non-radiological) Technical Specifications
Appendix C – Additional Conditions

Date of Issuance: March 23, 2000

Appendix C

Additional Conditions

Facility Operating License No. DPR-69

Constellation Energy Generation, LLC (the licensee) and Calvert Cliffs Nuclear Power Plant, LLC (CCNPP, LLC or Company) shall comply with the following conditions on the schedule noted below:

<u>Amendment Number</u>	<u>Additional Condition</u>	<u>Implementation Date</u>
201	Baltimore Gas and Electric Company (BGE) is authorized to relocate certain Technical Specification requirements to licensee-controlled documents. Implementation of this amendment shall include the relocation of these requirements to the appropriate documents as described in the licensee's application dated December 4, 1996, as supplemented by letters dated March 27, June 9, June 18, July 21, August 14, August 19, September 10, October 6, October 20, October 23, November 5, 1997, and January 12, January 28, and March 16, 1998, evaluated in the NRC staff's Safety Evaluation enclosed with this amendment.	This amendment is effective immediately and shall be implemented by August 31, 1998.
202	BGE is authorized to incorporate certain changes in the UFSAR regarding Main Steam Line Break, Steam Generator Tube Rupture, Seized Rotor, and Boron Dilution Analyses.	The updated UFSAR shall be implemented within 6 months after restart from the spring 1999 refueling outage.
211	The decommissioning trust agreement for Calvert Cliffs, Unit 2 at the time the license transfer to the Company from BGE is effected, is subject to the following: (a) The decommissioning trust agreement must be in a form acceptable to the NRC.	To be implemented at time the license transfer to the Company from BGE is effected.

Appendix C (Cont'd)

Additional Conditions

Facility Operating License No. DPR-69

<u>Amendment Number</u>	<u>Additional Condition</u>	<u>Implementation Date</u>
	<p>(b) With respect to the decommissioning trust funds, investments in the securities or other obligations of Constellation Energy Corporation or its affiliates, successors, or assigns shall be prohibited. Except for investments tied to market indexes or other non-nuclear-sector mutual funds, investments in any entity owning one or more nuclear power plants are prohibited.</p>	
	<p>(c) The decommissioning trust agreement must provide that no disbursements or payments from the trust shall be made by the trustee until the trustee has first given the NRC 30-days prior written notice of payment. The decommissioning trust agreement shall further contain a provision that no disbursements or payments from the trust shall be made if the trustee receives prior written notice of objection from the Director, Office of Nuclear Reactor Regulation.</p>	
	<p>(d) The decommissioning trust agreement must provide that the agreement cannot be amended in any material respect without 30-days prior written notification to the Director, Office of Nuclear Reactor Regulation.</p>	

Appendix C (Cont'd)

Additional Conditions

Facility Operating License No. DPR-69

<u>Amendment No.</u>	<u>Additional Condition</u>	<u>Implementation Date</u>
321	1) Deleted	No later than the closing date of the transaction approved on November 16, 2021.

Appendix C (Cont'd)

Additional Conditions

Facility Operating License No. DPR-69

<u>Amendment No.</u>	<u>Additional Condition</u>	<u>Implementation Date</u>
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- | | | |
|--|--|--|
| | <p>2) Constellation Energy Generation, LLC shall, no later than the date the closing of the transaction approved on November 16, 2021, occurs, enter into a Support Agreement of approximately \$126 million with CCNPP, LLC. Calvert Cliffs Nuclear Power Plant, LLC shall not take any action to cause Constellation Energy Generation, LLC, or its successors and assigns, to void, cancel, or materially modify the Constellation Energy Generation, LLC Support Agreement or cause it to fail to perform, or impair its performance under the Constellation Energy Generation, LLC Support Agreement, without the prior written consent of the NRC. The Constellation Energy Generation, LLC Support Agreement may not be amended or modified without 30 days prior written notice to the Director of the Office of Nuclear Reactor Regulation or their designee. An executed copy of the Constellation Energy Generation, LLC Support Agreement shall be submitted to the NRC no later than 30 days after the completion of the proposed transaction. Constellation Energy Generation, LLC shall inform the NRC in writing no later than 14 days after any funds are provided to or for CCNPP, LLC under the Constellation Energy Generation, LLC Support Agreement.</p> | |
|--|--|--|

Appendix C (Cont'd)

Additional Conditions

Facility Operating License No. DPR-69

<u>Amendment No.</u>	<u>Additional Condition</u>	<u>Implementation Date</u>
	3) Deleted.	
	4) Within 14 days of the closing of the transaction approved on November 16, 2021, Constellation Energy Generation, LLC shall submit to the NRC the Nuclear Operating Services Agreement reflecting the terms set forth in the application dated February 25, 2021. Section 7.1 of the Nuclear Operating Services Agreement may not be modified in any material respect related to financial arrangements that would adversely impact the ability of the licensee to fund safety-related activities authorized by the license without the prior written consent of the Director of the Office of Nuclear Reactor Regulation.	
	5) Deleted	
	6) Deleted	

Appendix C (Cont'd)

Additional Conditions

Facility Operating License No. DPR-69

<u>Amendment No.</u>	<u>Additional Condition</u>	<u>Implementation Date</u>
	7) Deleted	
	8) Deleted	
	9) Deleted	

5.0 ADMINISTRATIVE CONTROLS

5.3 Unit Staff Qualifications

5.3.1 Each member of the unit staff shall meet or exceed the minimum qualifications referenced for comparable positions as specified in the Constellation Energy Generation, LLC Quality Assurance Topical Report.



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

CONSTELLATION ENERGY GENERATION, LLC

DOCKET NO. 50-461

CLINTON POWER STATION, UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 243
License No. NPF-62

1. The U.S. Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Exelon Generation Company, LLC dated February 25, 2021, as supplemented by letters dated March 25, June 11, September 16, and September 29, 2021, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, Facility Operating License No. NPF-62 is hereby amended as indicated in the attachment to this license amendment.
3. This license amendment is effective as of the date of its issuance and shall be implemented within 15 days of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Bo M. Pham, Director
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Facility Operating
License

Date of Issuance: February 1, 2022

ATTACHMENT TO LICENSE AMENDMENT NO. 243

FACILITY OPERATING LICENSE NO. NPF-62

CLINTON POWER STATION, UNIT NO. 1

DOCKET NO. 50-461

Replace the following pages of the Facility Operating License; Appendix A, Technical Specifications; and Appendix B, Environmental Protection Plan, with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

Remove

License NPF-62

Page 1
Page 2
Page 3
Page 4
Page 6
Page 7
Page 8
Page 9
Attachment 2

Appendix A

5.0-5

Appendix B

cover page

Insert

License NPF-62

Page 1
Page 2
Page 3
Page 4
Page 6
Page 7
Page 8
Page 9
Attachment 2

Appendix A

5.0-5

Appendix B

cover page



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

CONSTELLATION ENERGY GENERATION, LLC

DOCKET NO. 50-461

CLINTON POWER STATION, UNIT NO. 1

FACILITY OPERATING LICENSE

License No. NPF-62

1. The Nuclear Regulatory Commission (The Commission or the NRC) has found that:
 - A. The application for license filed by the applicant complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's regulations set forth in 10 CFR Chapter I, and all required notifications to other agencies or bodies have been duly made;
 - B. Construction of the Clinton Power Station, Unit No. 1 (the facility) has been substantially completed in conformity with Construction Permit No. CPPR-137 and the application, as amended, the provisions of the Act and the regulations of the Commission:
 - C. The facility will operate in conformity with the application, as amended, the provisions of the Act, and the regulations of the Commission (except as exempted from compliance in Section 2.D. below);
 - D. There is reasonable assurance: (i) that the activities authorized by this operating license 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 set forth in 10 CFR Chapter I (except as exempted from compliance in Section 2.D below);
 - E. Constellation Energy Generation, LLC is technically qualified to engage in the activities authorized by this operating license in accordance with the Commission's regulations set forth in 10 CFR Chapter I;
 - F. Constellation Energy Generation, LLC has satisfied the applicable provisions of 10 CFR Part 140, "Financial Protection Requirements and Indemnity Agreements," of the Commission's regulations;

- G. The issuance of this license will not be inimical to the common defense and security or to the health and safety of the public;
 - H. After weighing the environmental, economic, technical, and other benefits of the facility against environmental and other costs and considering available alternatives, the issuance of Facility Operating License No. NPF-62, subject to the conditions for protection of the environment set forth in the Environmental Protection Plan attached as Appendix B, is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied;
 - I. The receipt, possession, and use of source, byproduct, and special nuclear material as authorized by this license will be in accordance with the Commission's regulations in 10 CFR Parts 30, 40, and 70; and
 - J. The receipt, production, possession, transfer, and use of Cobalt-60 as authorized by this license will be in accordance with the Commission's regulations in 10 CFR Part 30.
2. Based on the foregoing findings regarding this facility, and pursuant to approval by the Nuclear Regulatory Commission at a meeting on April 10, 1987, Facility Operating License No. NPF-62, which supersedes the license for fuel loading and low power testing, License No. NPF-55, issued on September 29, 1986, is hereby issued to Constellation Energy Generation, LLC to read as follows:
- A. This license applies to the Clinton Power Station, Unit No. 1, a boiling water nuclear reactor and associated equipment (the facility), owned by Constellation Energy Generation, LLC. The facility is located in Harp Township, DeWitt County, approximately six miles east of the city of Clinton in east-central Illinois and is described in the licensee's Final Safety Analysis Report, as supplemented and amended, and in the licensee's Environmental Report-Operating License Stage, as supplemented and amended.
 - B. Subject to the condition and requirements incorporated herein, the Commission hereby licenses:
 - (1) Constellation Energy Generation, LLC, pursuant to section 103 of the Act and 10 CFR Part 50, to possess, use and operate the facility at the designated location in Harp Township, DeWitt County, Illinois, in accordance with the procedures and limitations set forth in this license;
 - (2) Deleted
 - (3) Constellation Energy Generation, LLC, 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;

- (4) Constellation Energy Generation, LLC, pursuant to the Act and to 10 CFR Parts 30, 40, and 70, to receive, possess, and use at any time any byproduct, source and special nuclear material as sealed neutron sources for reactor startup, sealed sources for reactor instrumentation and radiation monitoring equipment calibration, and as fission detectors in amounts as required;
- (5) Constellation Energy Generation, 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;
- (6) Constellation Energy Generation, 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 the facility. Mechanical disassembly of the GE14i isotope test assemblies containing Cobalt-60 is not considered separation; and
- (7) Constellation Energy Generation, LLC, pursuant to the Act and 10 CFR Parts 30, to intentionally produce, possess, receive, transfer, and use Cobalt-60.

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

(1) Maximum Power Level

Constellation Energy Generation, LLC is authorized to operate the facility at reactor core power levels not in excess of 3473 megawatts thermal (100 percent rated power) in accordance with the conditions specified herein.

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A and the Environmental Protection Plan contained in Appendix B, as revised through Amendment No. 243, are hereby incorporated into this license. Constellation Energy Generation, LLC shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

- (3) Antitrust Conditions
Deleted
- (4) Control System Failures (Section 7.7.3.1, SER and SSER 6)*
Deleted
- (5) New Fuel Storage (Section 9.1.1, SER, SSER 6 and SSER 7)
Constellation Energy Generation, LLC shall store new fuel assemblies in accordance with the requirements specified in Attachment 2. Attachment 2 is hereby incorporated into this license.
- (6) Plant Operation Experience (Section 13.1.2.1, SSER 5)
Deleted
- (7) Emergency Planning (Section 13.3, SSER 6)
Deleted
- (8) Post-Fuel Loading Initial Test Program (Section 14, SER, SSER 5 and SSER 6)
Deleted
- (9) Emergency Response Capabilities (Generic Letter 82-33, Supplement 1 to NUREG-0737, Section 7.5.3.1, SSER 5 and SSER 8, and Section 18, SER, SSER 5 and Safety Evaluation Dated April 17, 1987)
 - a. Deleted
 - b. Deleted

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

- (c) Actions to minimize release to include consideration of:
 - 1. Water spray scrubbing
 - 2. Dose to onsite responders

- (23) Upon implementation of Amendment No. 178 adopting TSTF-448, Revision 3, the determination of control room envelope (CRE) unfiltered air leakage as required by SR 3.7.3.5, in accordance with TS 5.5.15.c.(i), the assessment of CRE habitability as required by Specification 5.5.15.c.(ii), and the measurement of CRE pressure as required by Specification 5.5.15.d, shall be considered met. Following implementation:
 - (a) The first performance of SR 3.7.3.5, in accordance with Specification 5.5.15.c.(i), shall be within the specified Frequency of 6 years, plus the 18-month allowance of SR 3.0.2, as measured from November 16, 2004, the date of the most recent successful tracer gas test, as stated in the February 8, 2005 letter response to Generic Letter 2003-01, or within the next 18 months if the time period since the most recent successful tracer gas test is greater than 6 years.
 - (b) The first performance of the periodic assessment of CRE habitability, Specification 5.5.15.c.(ii), shall be within 3 years, plus the 9-month allowance of SR 3.0.2, as measured from November 16, 2004, the date of the most recent successful tracer gas test, as stated in the February 8, 2005 letter response to Generic Letter 2003-01, or within the next 9 months if the time period since the most recent successful tracer gas test is greater than 3 years.
 - (c) The first performance of the periodic measurement of CRE pressure, Specification 5.5.15.d, shall be within 24 months, plus the 6 months allowed by SR 3.0.2, as measured from the date of the most recent successful pressure measurement test, or within 6 months if not performed previously.

- (24) At the time of the closing of the transfer of CPS and the respective license from AmerGen Energy Company, LLC (AmerGen) to Exelon Generation Company, AmerGen shall transfer to Exelon Generation Company ownership and control of AmerGen Clinton NQF, LLC, and AmerGen Consolidation, LLC shall be merged into Exelon Generation Consolidation, LLC. Also at the time of the closing, decommissioning funding assurance provided by Exelon Generation Company, using an additional method allowed under 10 CFR 50.75 if necessary, must be equal to or greater than the minimum amount calculated on that date pursuant to, and required by 10 CFR 50.75 for CPS. Furthermore, funds dedicated for CPS prior to closing shall remain dedicated to CPS following the closing. The name of AmerGen Clinton NQF, LLC shall be changed to Exelon Generation Clinton NQF, LLC at the time of the

closing. The NRC approved a transaction on November 16, 2021, that resulted in Exelon Generation Company, LLC being renamed Constellation Energy Generation, LLC. The name change resulted in a corresponding name change for the Clinton NQF.

- (25) Irradiated GE14i fuel bundles shall be stored at least four feet from the wall of the Spent Fuel Pool.
- (26) Adoption of 10 CFR 50.69, "Risk-informed categorization and treatment of structures, systems, and components for nuclear power plants"

Constellation Energy Generation, LLC is approved to implement 10 CFR 50.69 using the processes for categorization of Risk-Informed Safety Class (RISC)-1, RISC-2, RISC-3, and RISC-4 Structures, Systems, and Components (SSCs) using: Probabilistic Risk Assessment (PRA) models to evaluate risk associated with internal events, including internal flooding, and internal fire; the shutdown safety assessment process to assess shutdown risk; the Arkansas Nuclear One, Unit 2 (ANO-2) passive categorization method to assess passive component risk for Class 2 and Class 3 and non-Class SSCs and their associated supports; the results of the non-PRA evaluations that are based on the IPEEE Screening Assessment for External Hazards updated using the external hazard screening significance process identified in ASME/ANS PRA Standard RA-Sa-2009 for other external hazards except seismic; and the alternative seismic approach as described in EGC's submittal letter dated April 30, 2020, and all its subsequent associated supplements as specified in License Amendment No. 237 dated May 19, 2021.

Prior NRC approval, under 10 CFR 50.90, is required for a change to the categorization process specified above (e.g., change from a seismic margins approach to a seismic probabilistic risk assessment approach).

- (27) Constellation Energy Generation, LLC shall provide to the Director of the Office of Nuclear Reactor Regulation or the Director of the Office of Nuclear Material Safety and Safeguards, as applicable, a copy of any application, at the time it is filed, to transfer (excluding grants of security interests or liens) from Constellation Energy Generation, LLC to its direct or indirect parent, or to any other affiliated company, facilities for the production, transmission, or distribution of electric energy having a depreciated book value exceeding ten percent (10%) of Constellation Energy Generation, LLC's consolidated net utility plant, as recorded on Constellation Energy Generation, LLC's books of account.

- D. The facility requires exemptions from certain requirements of 10 CFR Part 50 and 10 CFR Part 70. These include: (a) an exemption from the requirements of 10 CFR 70.24 for the criticality alarm monitors around the fuel storage area; (b) an exemption from the requirement of 10 CFR Part 50, Appendix J – Option B, paragraph III.B, exempting the measured leakage rates from the main steam isolation valves from inclusion in the combined leak rate for local leak rate tests (Section 6.2.6 of SSER 6); and (c) an exemption from the requirements of paragraph III.B of Option B of 10 CFR Part 50, Appendix J, exempting leakage from the valve packing and the body-to-bonnet seal of valve 1E51-F374 associated with containment penetration 1MC-44 from inclusion in the combined leakage rate for penetrations and valves subject to Type B and C tests (SER supporting Amendment 62 to Facility Operating License No. NPF-62). The special circumstances regarding each exemption, except for item (a) above, are identified in the referenced section of the safety evaluation report and the supplements thereto.

An exemption was previously granted pursuant to 10 CFR 70.24. The exemption was granted with NRC Material License No. SNM-1886, issued November 27, 1985, and relieved the licensee from the requirement of having a criticality alarm system. Constellation Energy Generation, LLC is hereby exempted from the criticality alarm system provision of 10 CFR 70.24 so far as this section applies to the storage of fuel assemblies held under this license.

These exemptions are authorized by law, will not present an undue risk to the public health and safety, and are consistent with the common defense and security. The exemptions in items (b) and (c) above are granted pursuant to 10 CFR 50.12. With these exemptions, the facility will operate, to the extent authorized herein, in conformity with the application, as amended, the provisions of the Act, and the rules and regulations of the Commission.

- E. Constellation Energy Generation, LLC shall fully implement and maintain in effect all provisions of the Commission-approved physical security, training and qualification, and safeguards contingency plans including amendments made pursuant to 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: “Clinton Power Station Security Plan, Training and Qualification Plan, and Safeguards Contingency Plan, Revision 2,” submitted by letter dated May 17, 2006.

Constellation Energy Generation, LLC shall fully implement and maintain in effect all provisions of the Commission-approved cyber security plan (CSP), including changes made pursuant to the authority of 10 CFR 50.90 and 10 CFR 50.54(p).

The CSP was approved by License Amendment No. 194 and modified by License Amendment No. 206.

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

- F. Constellation Energy Generation, LLC shall implement and maintain in effect all provisions of the approved fire protection program as described in the Final Safety Analysis Report as amended, for the Clinton Power Station, Unit No. 1, and as approved in the Safety Evaluation Report (NUREG-0853) dated February 1982 and Supplement Nos. 1 thru 8 thereto subject to the following provision:

The licensee may make changes to the approved fire protection program without prior approval of the Commission only if those changes would not adversely affect the ability to achieve and maintain safe shutdown in the event of a fire.

- G. Deleted.
- H. Constellation Energy Generation, LLC shall have and maintain financial protection of such type and in such amounts as the Commission shall require in accordance with Section 170 of the Atomic Energy Act of 1954, as amended, to cover public liability claims.
- I. This license is effective as of the date of issuance and shall expire at midnight on April 17, 2027.

FOR THE NUCLEAR REGULATORY COMMISSION

Original signed by:

Thomas E. Murley, Director
Office of Nuclear Reactor Regulation

Enclosures:

1. Attachments 1 (Deleted) and 2
2. Appendix A - Technical Specifications (NUREG-1235)
3. Appendix B - Environmental Protection Plan
4. Appendix C - Deleted

Date of Issuance: April 17, 1987

ATTACHMENT 2
TO NPF-62
NEW FUEL STORAGE

Constellation Energy Generation, LLC shall store new fuel assemblies in accordance with the following requirements.

- a. No more than three fuel assemblies shall be outside their shipping containers, storage racks, or the reactor vessel at any one time.
- b. The minimum edge-to-edge distance between the group of three fuel assemblies and all other fuel assemblies shall be 12 inches.
- c. Fuel assemblies, when stored in the New Fuel Storage Vault, shall be stored such that: no more than 12 rows of fuel assemblies shall remain uncovered during the loading or unloading of fuel assemblies; metal covers shall cover all other rows containing fuels assemblies during loading and unloading of fuel assemblies; and when loading or unloading of fuel assemblies is not in progress, metal covers shall cover all rows of fuel assemblies.
- d. Fuel assemblies shall be stored in such a manner that water would drain freely from the assemblies in the event of flooding and subsequent draining of the fuel storage area.
- e. Fuel assemblies shall be stored in the containment fuel storage pool only under water.
- f. No fuel assemblies shall be stored in the control rod racks.
- g. All fire hoses servicing the New Fuel Storage Vault shall be equipped with solid stream nozzles.

5.0 ADMINISTRATIVE CONTROLS

5.3 Unit Staff Qualifications

5.3.1 Each member of the unit staff shall meet or exceed the minimum qualifications referenced for comparable positions as specified in the Constellation Energy Generation, LLC Quality Assurance Topical Report.

APPENDIX B

TO FACILITY LICENSE NO. NPF-62

CLINTON POWER STATION

UNIT NO. 1

CONSTELLATION ENERGY GENERATION, LLC

DOCKET NO. 50-461

ENVIRONMENTAL PROTECTION PLAN
(NON-RADIOLOGICAL)

April 17, 1987

Clinton Power Station EPP

Amendment No. 243



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

CONSTELLATION ENERGY GENERATION, LLC
DOCKET NO. 50-010
DRESDEN NUCLEAR POWER STATION, UNIT 1
AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 50
License No. DPR-2

1. The U.S. Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Exelon Generation Company, LLC dated February 25, 2021, as supplemented by letters dated March 25, June 11, September 16, and September 29, 2021, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, Facility Operating License No. DPR-2 is hereby amended as indicated in the attachment to this license amendment.
3. This license amendment is effective as of the date of its issuance and shall be implemented within 15 days of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Bruce A. Watson, Chief
Reactor Decommissioning Branch
Division of Decommissioning, Uranium
Recovery, and Waste Programs
Office of Nuclear Material Safety
and Safeguards

Attachment: Changes to the
Facility Operating License

Date of Issuance: February 1, 2022

ATTACHMENT TO LICENSE AMENDMENT NO. 50

FACILITY OPERATING LICENSE NO. DPR-2

DRESDEN NUCLEAR POWER STATION, UNIT 1

DOCKET NO. 50-010

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

Remove

License DPR-2

Page 1

Page 2

Page 3

Appendix A

Cover page

Insert

License DPR-2

Page 1

Page 2

Page 3

Appendix A

Cover page



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

CONSTELLATION ENERGY GENERATION, LLC

DOCKET NO. 50-10

AMENDED FACILITY OPERATING LICENSE

Amendment No. 50
License No. DPR-2

1. The Atomic Energy Commission (the Commission) has found that:
 - A. The application, as amended, for license filed by the applicant* 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 and all required notifications to other agencies or bodies have been duly made;
 - B. Construction of the Dresden Nuclear Power Station, Unit 1 has been substantially completed in conformity with Construction Permit No. CPPR-2 and the application, as amended, the provisions of the Act, and the rules and regulations of the Commission;
 - C. The facility will be maintained in conformity with the application, as amended, the provisions of the Act, and the rules and regulations of the Commission;
 - D. There is reasonable assurance: (i) that the activities authorized by this operating license can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the rules and regulations of the Commission;
 - E. Constellation Energy Generation, LLC is technically and financially qualified to engage in the activities authorized by this operating license in accordance with the rules and regulations of the Commission;
 - F. Constellation Energy Generation, LLC has satisfied the applicable provisions of 10 CFR Part 140, "Financial Protection Requirements and Indemnity Agreements," of the Commission regulations;

* The Nuclear Regulatory Commission approved the transfer of the license from Commonwealth Edison Company to Exelon Generation Company, LLC on August 3, 2000. The Nuclear Regulatory Commission approved a transaction on November 16, 2021, that resulted in Exelon Generation Company, LLC being renamed Constellation Energy Generation, LLC.

- G. The issuance of this operating license will not be inimical to the common defense and security or to the health and safety of the public and does not involve a significant hazards consideration, and
 - H. The receipt, possession, and use of byproduct, source and special nuclear materials as authorized by this license will be in accordance with the Commission's regulations in 10 CFR Parts 30, 40 and 70 including Sections 30.33, 40.32, 70.23, and 70.31.
2. Facility Operating License No. DPR-2 issued to Constellation Energy Generation, LLC (the licensee) is hereby amended in its entirety to read as follows:
- A. This license applies to Dresden Nuclear Power Station Unit 1 dual-cycle, boiling water reactor (herein the facility), owned by the licensee. The facility is located in Grundy County, Illinois, and is described in the application attested to on May 31, 1955, and subsequent amendments thereto, including the amendment dated May 17, 1973.
 - B. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses Constellation Energy Generation, LLC:
 - (1) Pursuant to Section 104b of the Act and 10 CFR Part 50, "Licensing of Production and Utilization Facilities," to possess and maintain but not to operate the facility at the designated location in Grundy County, Illinois, in accordance with the procedures and limitations set forth in the license;
 - (2) Pursuant to the Act and 10 CFR Part 70, to possess at any time special nuclear materials, not including plutonium, as reactor fuel, in accordance with the limitation for storage as described in the Defueled Safety Analysis Report.
 - (3) Pursuant to the Act and 10 CFR Part 70, to possess at any time up to 6631 grams of plutonium utilized in previous operations of the facility.
 - (4) Pursuant to the Act and 10 CFR Parts 30, 40, and 70, to possess at any time any byproduct, source and special nuclear materials as sealed neutron sources and as fission detectors in amounts required, and to receive, possess and use sealed sources for reactor instrumentation and radiation monitoring equipment calibration.

- (5) 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 materials without restriction to chemical or physical form, for sample analysis or instrument and equipment calibration or associated with radioactive apparatus or components;
- (6) Pursuant to the Act and 10 CFR Parts 30 and 70, to possess, but not separate, such byproduct and special nuclear materials which have been produced by the operation of the facility.

C. This license shall be deemed to contain and is subject to the conditions specified in the following Commission regulations in 10 CFR Chapter I Part 20, Section 30.34 of Part 30, Section 40.41 of Part 40, Sections 50.54 and 50.59 of Part 50, and Section 70.32 of Part 70, 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) Deleted
- (2) Technical Specifications

The Technical Specifications contained in Appendix A as revised through Amendment No. 50, are hereby incorporated in the license. The licensee shall maintain the facility in accordance with the Technical Specifications.

- (3) Deleted
- (4) Deleted
- (5) Deleted
- (6) Deleted
- (7) Constellation Energy Generation, LLC shall provide to the Director of the Office of Nuclear Reactor Regulation or the Director of the Office of Nuclear Material Safety and Safeguards, as applicable, a copy of any application, at the time it is filed, to transfer (excluding grants of security interests or liens) from Constellation Energy Generation, LLC to its direct or indirect parent, or to any other affiliated company, facilities for the production, transmission, or distribution of electric energy having a depreciated book value exceeding ten percent (10%) of Constellation Energy Generation, LLC's consolidated net utility plant, as recorded on Constellation Energy Generation, LLC's books of account.

Appendix A

to

Amended Facility License DPR-2

Technical Specifications and Bases For

Dresden Nuclear Power Station Unit 1

Grundy County, Illinois

Constellation Energy Generation, LLC

Docket No. 50-10

Date: September 3, 1993



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

CONSTELLATION ENERGY GENERATION, LLC

DOCKET NO. 50-237

DRESDEN NUCLEAR POWER STATION, UNIT 2

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 277
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 February 25, 2021, as supplemented by letters dated March 25, June 11, September 16, and September 29, 2021, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, Renewed Facility Operating License No. DPR-19 is hereby amended as indicated in the attachment to this license amendment.
3. This license amendment is effective as of the date of its issuance and shall be implemented within 15 days of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Bo M. Pham, Director
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Renewed Facility
Operating License

Date of Issuance: February 1, 2022



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

CONSTELLATION ENERGY GENERATION, LLC

DOCKET NO. 50-249

DRESDEN NUCLEAR POWER STATION, UNIT 3

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 270
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 February 25, 2021, as supplemented by letters dated March 25, June 11, September 16, and September 29, 2021, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, Renewed Facility Operating License No. DPR-25 is hereby amended as indicated in the attachment to this license amendment.
3. This license amendment is effective as of the date of its issuance and shall be implemented within 15 days of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Bo M. Pham, Director
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Renewed Facility
Operating License

Date of Issuance: February 1, 2022

ATTACHMENT TO LICENSE AMENDMENT NOS. 277 AND 270

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, 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 1
Page 2
Page 3
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License DPR-25

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Appendix A

5.3-1

Insert

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License DPR-25

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Appendix A

5.3-1



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

CONSTELLATION ENERGY GENERATION, LLC

DOCKET NO. 50-237

DRESDEN NUCLEAR POWER STATION, UNIT 2

RENEWED FACILITY OPERATING LICENSE NO. DPR-19

1. The U.S. Nuclear Regulatory Commission (Commission) having previously made the findings set forth in license No. DPR-19 issued on February 20, 1991, has now found that:
 - A. The application to renew license No. DPR-19 filed by the Exelon Generation Company, LLC* 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, and all required notifications to other agencies or bodies have been duly made;
 - B. Construction of the Dresden Nuclear Power Station, Unit 2 (the facility) has been completed in conformity with Construction Permit No. CPPR-18 and the application, as amended, the provisions of the Act, and the regulations of the Commission, and has been operating under a provisional license since December 22, 1969;
 - C. Actions have been identified and have been or will be taken with respect to (1) managing the effects of aging during the period of extended operation on the functionality of structures and components that have been identified to require review under 10 CFR 54.21(a)(1), and (2) time-limited aging analyses that have been identified to require review under 10 CFR 54.21(c), such that there is reasonable assurance that the activities authorized by this renewed operating license will continue to be conducted in accordance with the current licensing basis, as defined in 10 CFR 54.3, for Dresden Nuclear Power Station, Unit 2 (facility or plant), and that any changes made to the plant's current licensing basis in order to comply with 10 CFR 54.29(a) are in accord with the Act and the Commission's regulations;
 - D. The facility will operate in conformity with the application, as amended, the provisions of the Act, and the regulations of the Commission (except as exempted from compliance in Section 2.D below);

* The Nuclear Regulatory Commission approved the transfer of the license from Commonwealth Edison Company to Exelon Generation Company, LLC on August 3, 2000. The Nuclear Regulatory Commission approved a transaction on November 16, 2021, that resulted in Exelon Generation Company, LLC being renamed Constellation Energy Generation, LLC.

- E. There is reasonable assurance: (i) that the activities authorized by this renewed operating license 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 set forth in 10 CFR Chapter I (except as exempted from compliance in Section 2.0 below);
 - F. Constellation Energy Generation, LLC is technically qualified to engage in the activities authorized by this renewed operating license in accordance with the rules and regulations of the Commission;
 - G. Constellation Energy Generation, LLC has satisfied the applicable provisions of 10 CFR Part 140, "Financial Protection Requirements and Indemnity Agreements," of the Commission's regulations;
 - H. The issuance of this renewed operating license will not be inimical to the common defense and security or to the health and safety of the public;
 - I. After weighing the environmental, economic, technical, and other benefits of the facility against environmental and other costs and considering available alternatives, the issuance of this Renewed Facility Operating License No. DPR-19 is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied; and
 - J. The receipt, possession, and use of source, byproduct and special nuclear material as authorized by this renewed operating license will be in accordance with the Commission's regulations in 10 CFR Parts 30, 40 and 70.
2. On the basis of the foregoing findings regarding this facility, Facility Operating License No. DPR-19, issued February 20, 1991, is superseded by Renewed Facility Operating License No. DPR-19, which is hereby issued to Constellation Energy Generation, LLC to read as follows:
- A. This renewed operating license applies to the Dresden Nuclear Power Station, Unit 2, a boiling water reactor and associated equipment (the facility). The facility is located in Grundy County, Illinois, and is described in the licensee's Updated Final Safety Analysis Report, as supplemented and amended, and in the licensee's Environmental Report, as supplemented and amended.
 - B. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses:
 - (1) Constellation Energy Generation, LLC, pursuant to Section 104b of the Act and 10 CFR Part 50, to possess, use, and operate the facility at the designated location in Grundy County, Illinois, in accordance with the procedures and limitations set forth in this renewed operating license;

- (2) Constellation Energy Generation, 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) Constellation Energy Generation, 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) Constellation Energy Generation, 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) Constellation Energy Generation, 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. 277, 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.

(7) Additional Conditions

The Additional Conditions contained in Appendix B, as revised through Amendment No. 191, are hereby incorporated into this renewed operating license. The licensee shall operate the facility in accordance with the Additional Conditions.

(8) Deleted

(9) Deleted

(10) Constellation Energy Generation, LLC shall provide to the Director of the Office of Nuclear Reactor Regulation or the Director of the Office of Nuclear Material Safety and Safeguards, as applicable, a copy of any application, at the time it is filed, to transfer (excluding grants of security interests or liens) from Constellation Energy Generation, LLC to its direct or indirect parent, or to any other affiliated company, facilities for the production, transmission, or distribution of electric energy having a depreciated book value exceeding ten percent (10%) of Constellation Energy Generation, LLC's consolidated net utility plant, as recorded on Constellation Energy Generation, LLC's books of account.

(11) Deleted.

(12) Deleted.

(13) Deleted.

(14) The licensee shall relocate certain Technical Specification requirements to licensee-controlled documents upon implementation of the Amendment No. 185. The items and appropriate documents are as described in Table LA, "Removal of Details Matrix," and Table R, "Relocated Specifications," that are attached to the NRC's Safety Evaluation enclosed with Amendment No. 185.

- (20) Upon implementation of Amendment No. 226 adopting TSTF-448, Revision 3, the determination of control room envelope (CRE) unfiltered air leakage as required by SR 3.7.4.4, in accordance with TS 5.5.14.c.(i), the assessment of CRE habitability as required by Specification 5.5.14.c.(ii), and the measurement of CRE pressure as required by Specification 5.5.14.d, shall be considered met. Following implementation:
- (a) The first performance of SR 3.7.4.4, in accordance with Specification 5.5.14.c.(i), shall be within the specified Frequency of 6 years, plus the 18-month allowance of SR 3.0.2, as measured from January 1997, the date of the most recent successful tracer gas test, as stated in the December 9, 2003 letter response to Generic Letter 2003-01, or within the next 18 months if the time period since the most recent successful tracer gas test is greater than 6 years.
 - (b) The first performance of the periodic assessment of CRE habitability, Specification 5.5.14.c.(ii), shall be within 3 years, plus the 9-month allowance of SR 3.0.2, as measured from January 1997, the date of the most recent successful tracer gas test, as stated in the December 9, 2003 letter response to Generic Letter 2003-01, or within the next 9 months if the time period since the most recent successful tracer gas test is greater than 3 years.
 - (c) The first performance of the periodic measurement of CRE pressure, Specification 5.5.14.d, shall be within 24 months, plus the 6 months allowed by SR 3.0.2, as measured from the date of the most recent successful pressure measurement test, or within 6 months if not performed previously.
- (21) Upon implementation of Amendment No. 249 the licensee shall adhere to the following requirements as part of the DNPS unit 2 spent fuel pool coupon surveillance program to ensure that the B-10 areal density of the BORAL remains at or above its minimum credited value and that the regulatory requirement to maintain the Technical Specification value of $k_{\text{eff}} \leq 0.95$ continues to be met:
- 1. Ensure that coupon measurements of B-10 areal density are performed by a qualified laboratory;
 - 2. Ensure that the coupons are removed for evaluation every 10 years;
 - 3. Ensure that should any coupon be identified as failing the minimum certified B-10 areal density criterion based on coupon test results, the licensee will perform in-situ testing to confirm that the minimum B-10 areal density (0.02 g/cm^2) is met for the BORAL panels installed in the DNPS spent fuel pools; and,

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: "Dresden Nuclear Power Station Security Plan, Training and Qualification Plan, and Safeguards Contingency Plan, Revision 2," submitted by letter dated May 17, 2006.

Constellation Energy Generation, LLC shall fully implement and maintain in effect all provisions of the Commission-approved cyber security plan (CSP), including changes made pursuant to the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The CSP was approved by License Amendment No. 238 as modified by License Amendment No. 246.

- G. Deleted
- H. The licensee shall have and maintain financial protection of such type and in such amounts as the Commission shall require in accordance with Section 170 of the Atomic Energy Act of 1954, as amended, to cover public liability claims.
- I. Updated Final Safety Analysis Report

The Updated Final Safety Analysis Report supplement, submitted pursuant to 10 CFR 54.21(d), describes certain future activities to be completed prior to the period of extended operation. The licensee shall complete these activities no later than December 22, 2009, and shall notify the NRC in writing when implementation of these activities is complete and can be verified by NRC inspection.

The Updated Final Safety Analysis Report supplement, as revised, shall be included in the next scheduled update to the Updated Final Safety Analysis Report required by 10 CFR 50.71(e)(4) following issuance of this renewed license. Until that update is complete, the licensee may make changes to the programs and activities described in the supplement without prior Commission approval, provided that the licensee evaluates such change pursuant to the criteria set forth in 10 CFR 50.59 and otherwise complies with the requirements in that section.
- J. All capsules in the reactor vessel that are removed and tested must meet the test procedures and reporting requirements of ASTM E 185-82 to the extent practicable for the configuration of the specimens in the capsule. Any changes to the capsule withdrawal schedule, including spare capsules, must be approved by the NRC prior to implementation. All capsules placed in storage must be maintained for future insertion.

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



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

CONSTELLATION ENERGY GENERATION, LLC

DOCKET NO. 50-249

DRESDEN NUCLEAR POWER STATION, UNIT 3

RENEWED FACILITY OPERATING LICENSE NO. DPR-25

The U.S. Nuclear Regulatory Commission (Commission) having previously made the findings set forth in License No. DPR-25 issued on January 12, 1971, has now found that:

- a. The application to renew License No. DPR-25 filed by the Exelon Generation Company, LLC* 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, and all required notifications to other agencies or bodies have been duly made;
- b. Actions have been identified and have been or will be taken with respect to (1) managing the effects of aging during the period of extended operation on the functionality of structures and components that have been identified to require review under 10 CFR 54.21(a)(1), and (2) time-limited aging analyses that have been identified to require review under 10 CFR 54.21(c), such that there is reasonable assurance that the activities authorized by this renewed operating license will continue to be conducted in accordance with the current licensing basis, as defined in 10 CFR 54.3, for Dresden Nuclear Power Station, Unit 3 (facility or plant), and that any changes made to the plant's current licensing basis in order to comply with 10 CFR 54.29(a) are in accord with the Act and the Commission's regulations;
- c. The applicant* has submitted to the Commission all technical information required by Provisional Construction Permit No. CPPR-22, the Atomic Energy Act of 1954, as amended (the Act), and the rules and regulations of the Commission to complete the application for a construction permit and facility license dated February 10, 1966, as supplemented by application for a facility license dated November 17, 1967 and amended by Amendment Nos. 8 through 24, dated August 30, 1968, November 21, 1968, February 28, 1969, March 18, 1969, April 16, 1969, May 20, 1969, July 2, 1969, July 22, 1969, August 5, 1969, August 8, 1969, August 10, 1969, August 18, 1969, September 2, 1969, October 16, 1969, May 7, 1970, August 11, 1970 and

* The Nuclear Regulatory Commission approved the transfer of the license from Commonwealth Edison Company to Exelon Generation Company, LLC on August 3, 2000. The Nuclear Regulatory Commission approved a transaction on November 16, 2021, that resulted in Exelon Generation Company, LLC being renamed Constellation Energy Generation, LLC.

September 4, 1970, respectively, (the application); and supplemented by the applicant's letter dated December 17, 1970, and telegram dated December 18, 1970;

- d. The Dresden Nuclear Power Station Unit 3 (the facility) has been substantially completed in conformity with Provisional Construction Permit No. CPPR-22, the application, the provisions of the Act and the rules and regulations of the Commission;
- e. The facility will operate in conformity with the application, as amended, the provisions of the Act, and the regulations of the Commission;
- f. There is reasonable assurance: (i) that the facility can be operated at power levels not in excess of 2957 megawatts (thermal) in accordance with this license without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the rules and regulations of the Commission;
- g. Constellation Energy Generation, LLC is technically and financially qualified to engage in the activities authorized by this renewed operating license in accordance with the rules and regulations of the Commission;
- h. Constellation Energy Generation, LLC has furnished proof of financial protection to satisfy the requirements of 10 CFR Part 140;
- i. The issuance of this renewed operating license will not be inimical to the common defense and security or to the health and safety of the public; and
- j. After weighing the environmental, economic, technical, and other benefits of the facility against environmental and other costs and considering available alternatives, the issuance of this Renewed Facility Operating License No. DPR-25 is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

On the basis of the foregoing findings regarding this facility, Facility Operating License No. DPR-25, issued January 12, 1971, is superseded by Renewed Facility Operating License No. DPR-25, which is hereby issued to Constellation Energy Generation, LLC to read as follows:

- 1. This renewed operating license applies to the Dresden Nuclear Power Station, Unit 3, a single cycle, boiling, light water reactor and electric generating equipment (the facility). The facility is located at the Dresden Nuclear Power Station in Grundy County, Illinois, and is described in the "Safety Analysis Report," as supplemented and amended (Amendment Nos. 8 through 24).
- 2. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses Constellation Energy Generation, LLC:
 - A. Pursuant to Section 104b of the Act and 10 CFR Part 50, "Licensing of Production and Utilization Facilities," to possess, use, and operate the facility as

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. 270, 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.

- F. 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.

- G. 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 March 22, 1978 with supplements dated December 2, 1980, and February 12, 1981; January 19, 1983; July 17, 1987; September 28, 1987; and January 5, 1989, subject to the following provision:

The licensee may make changes to the approved fire protection program without prior approval of the Commission only if those changes would not adversely affect the ability to achieve and maintain safe shutdown in the event of a fire.

- H. Physical Protection

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: "Dresden Nuclear Power Station Security Plan, Training and Qualification Plan, and Safeguards Contingency Plan, Revision 2," submitted by letter dated May 17, 2006.

Constellation Energy Generation, LLC shall fully implement and maintain in effect all provisions of the Commission-approved cyber security plan (CSP), including changes made pursuant to the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The CSP was approved by License Amendment No. 231 and modified by License Amendment No. 239.

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

M. Deleted [Amdt. 85, 12-12-85]

N. By Amendment No. 144, the license is amended to allow, on a one time temporary basis, operation of Dresden, Unit 3, with the corner room structural steel members in the Low Pressure Coolant Injection Corner Rooms outside the Updated Final Safety Analysis Report (UFSAR) design parameters. Operation under these conditions is allowed up to and including the next scheduled refueling outage (D3R14).

The repairs to Dresden, Unit 3, corner room structural steel shall restore the steel design margins to the current UFSAR (updated through Revision 1A) design criteria. The design of the modifications to the Dresden, Unit 3, corner room structural steel members will be based on use of elastic section modulus and the structural steel stresses will be limited to 1.6 of the American Institute of Steel Construction (AISC allowables). The modifications to Dresden, Unit 3, corner room structural steel will be implemented during the upcoming D3R14 refueling outage.

During this interim period of operation, should vibratory ground motion exceeding the UFSAR Operating Basis Earthquake (OBE) design parameters, Dresden, Unit 3, will be shut down for inspection and will not start up without prior NRC approval.

O. Additional Conditions

The Additional Conditions contained in Appendix B, as revised through Amendment No. 185, are hereby incorporated into this license. The licensee shall operate the facility in accordance with the Additional Conditions.

P. Deleted

Q. Deleted

R. Constellation Energy Generation, LLC shall provide to the Director of the Office of Nuclear Reactor Regulation or the Director of the Office of Nuclear Material Safety and Safeguards, as applicable, a copy of any application, at the time it is filed, to transfer (excluding grants of security interests or liens) from Constellation Energy Generation, LLC to its direct or indirect parent, or to any other affiliated company, facilities for the production, transmission, or distribution of electric energy having a depreciated book value exceeding ten percent (10%) of Constellation Energy Generation, LLC's consolidated net utility plant, as recorded on Constellation Energy Generation, LLC's books of account.

- S. Deleted.
- T. Deleted.
- U. Deleted.
- V. The licensee shall relocate certain Technical Specification requirements to licensee-controlled documents upon implementation of the Amendment No. 180. The items and appropriate documents are as described in Table LA, "Removal of Details Matrix," and Table R, "Relocated Specifications," that are attached to the NRC's Safety Evaluation enclosed with Amendment No. 180.
- W. The schedule for performing Surveillance Requirements (SRs) that are new or revised in Amendment No. 180 shall be as follows:

For SRs that are new in this amendment, the first performance is due at the end of the first surveillance interval that begins on the date of implementation of Amendment No. 180.

For SRs that existed prior to this amendment whose intervals of performance are being reduced, the first reduced surveillance interval begins upon completion of the first surveillance performed after implementation of Amendment No. 180.

For SRs that existed prior to this amendment that have modified acceptance criteria, the first performance is due at the end of the first surveillance interval that began on the date the surveillance was last performed prior to the implementation of Amendment No. 180.

For SRs that existed prior to this amendment whose intervals of performance are being extended, the first extended surveillance interval begins upon completion of the last surveillance performed prior to implementation of Amendment No. 180.

Y. Updated Final Safety Analysis Report

The Updated Final Safety Analysis Report supplement, submitted pursuant to 10 CFR 54.21(d), describes certain future activities to be completed prior to the period of extended operation. The licensee shall complete these activities no later than January 12, 2011, and shall notify the NRC in writing when implementation of these activities is complete and can be verified by NRC inspection.

The Updated Final Safety Analysis Report supplement, as revised, shall be included in the next scheduled update to the Updated Final Safety Analysis Report required by 10 CFR 50.71(e)(4) following issuance of this renewed license. Until that update is complete, the licensee may make changes to the programs and activities described in the supplement without prior Commission approval, provided that the licensee evaluates such change pursuant to the criteria set forth in 10 CFR 50.59 and otherwise complies with the requirements in that section.

- Z. All capsules in the reactor vessel that are removed and tested must meet the test procedures and reporting requirements of ASTM E 185-82 to the extent practicable for the configuration of the specimens in the capsule. Any changes to the capsule withdrawal schedule, including spare capsules, must be approved by the NRC prior to implementation. All capsules placed in storage must be maintained for future insertion.

AA. Mitigation Strategy License Condition

Develop and maintain strategies for addressing large fires and explosions and that include the following key areas:

- (a) Fire fighting response strategy with the following elements:
 - 1. Pre-defined coordinated fire response strategy and guidance
 - 2. Assessment of mutual aid fire fighting assets
 - 3. Designated staging areas for equipment and materials
 - 4. Command and control
 - 5. Training of response personnel

- (b) Operations to mitigate fuel damage considering the following:
 - 1. Protection and use of personnel assets
 - 2. Communications
 - 3. Minimizing fire spread
 - 4. Procedures for implementing integrated fire response strategy
 - 5. Identification of readily-available pre-staged equipment
 - 6. Training on integrated fire response strategy
 - 7. Spent fuel pool mitigation measures

- DD. Upon implementation of Amendment No. 242 the licensee shall adhere to the following requirements as part of the DNPS unit 3 spent fuel pool coupon surveillance program to ensure that the B-10 areal density of the BORAL remains at or above its minimum credited value and that the regulatory requirement to maintain the Technical Specification value of $k_{\text{eff}} \leq 0.95$ continues to be met:
- (1) Ensure that coupon measurements of B-10 areal density are performed by a qualified laboratory;
 - (2) Ensure that the coupons are removed for evaluation every 10 years;
 - (3) Ensure that should any coupon be identified as failing the minimum certified B-10 areal density criterion based on coupon test results, the licensee will perform in-situ testing to confirm that the minimum B-10 areal density (0.02 g/cm^2) is met for the BORAL panels installed in the DNPS spent fuel pools; and,
 - (4) Submit a report to the NRC within 90 days following the completion of evaluations associated with Item 3 above. The report shall include; a description of the testing results, the assessments performed, and the interim and long-term corrective actions for abnormal indications.

5.0 ADMINISTRATIVE CONTROLS

5.3 Unit Staff Qualifications

5.3.1 Each member of the unit staff shall meet or exceed the minimum qualifications referenced for comparable positions as specified in the Constellation Energy Generation, LLC Quality Assurance Topical Report.



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

CONSTELLATION FITZPATRICK, LLC

AND

CONSTELLATION ENERGY GENERATION, LLC

DOCKET NO. 50-333

JAMES A. FITZPATRICK NUCLEAR POWER PLANT

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 347
Renewed License No. DPR-59

1. The U.S. Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Exelon Generation Company, LLC dated February 25, 2021, as supplemented by letters dated March 25, June 11, September 16, and September 29, 2021, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, Renewed Facility Operating License No. DPR-59 is hereby amended as indicated in the attachment to this license amendment.
3. This license amendment is effective as of the date of its issuance and shall be implemented within 15 days of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Bo M. Pham, Director
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Renewed Facility
Operating License

Date of Issuance: February 1, 2022

ATTACHMENT TO LICENSE AMENDMENT NO. 347
RENEWED FACILITY OPERATING LICENSE NO. DPR-59
JAMES A. FITZPATRICK NUCLEAR POWER PLANT
DOCKET NO. 50-333

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

Remove

License DPR-59

Page 1
Page 2
Page 3
Page 4
Page 5
Page 6
Page 8
Page 9

Appendix A

5.2-2
5.3-1

Appendix C

Page 1

Insert

License DPR-59

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Appendix A

5.2-2
5.3-1

Appendix C

Page 1



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

CONSTELLATION FITZPATRICK, LLC

AND

CONSTELLATION ENERGY GENERATION, LLC

DOCKET NO. 50-333

JAMES A. FITZPATRICK NUCLEAR POWER PLANT

RENEWED FACILITY OPERATING LICENSE

Renewed License No. DPR-59

1. The Nuclear Regulatory Commission (NRC or the Commission), having previously made the findings set forth in Facility Operating License No. DPR-59, dated November 21, 2000, has found that:
 - A. The application to renew Facility Operating License No. DPR-59 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, and all required notifications to other agencies or bodies have been duly made;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. Actions have been identified and have been or will be taken with respect to: (1) managing the effects of aging on the functionality of structures and components that have been identified to require review under 10 CFR 54.21(a)(1) during the period of extended operation, and (2) time-limited aging analyses that have been identified to require review under 10 CFR 54.21(c), such that there is reasonable assurance that the activities authorized by this renewed operating license will continue to be conducted in accordance with the current licensing basis, as defined in 10 CFR 54.3 for the facility, and that any changes made to the facility's current licensing basis in order to comply with 10 CFR 54.29(a) are in accordance with the Act and the Commission's regulations;
 - D. There is reasonable assurance (i) that the activities authorized by this renewed operating license 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;
 - E. Constellation FitzPatrick, LLC ("Constellation FitzPatrick") and Constellation Energy Generation, LLC are financially and technically qualified to engage in the activities authorized by this renewed operating license;

- F. Constellation FitzPatrick and Constellation Energy Generation, LLC have satisfied the applicable provisions of 10 CFR Part 140, "Financial Protection Requirements and Indemnity Agreements," of the Commission's regulations;
 - G. The issuance of this renewed operating license will not be inimical to the common defense and security or to the health and safety of the public;
 - H. The receipt, possession, and use of source, byproduct, and special nuclear material as authorized by this renewed operating license will be in accordance with the Commission's regulations in 10 CFR Parts 30, 40, and 70, including 10 CFR Sections 30.33, 40.32, 70.23, and 70.31; and
 - I. The issuance of this renewed operating license is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.
2. Accordingly, Facility Operating License No. DPR-59 (previously issued to the Power Authority of the State of New York and Niagara Mohawk Power Corporation pursuant to the Atomic Safety and Licensing Board's Initial Decision and Supplemental Initial Decision dated November 12, 1973, and January 10, 1974, respectively; and the Atomic Safety and Licensing Appeal Board's Decision dated January 29, 1974) as previously amended and transferred to Entergy Nuclear FitzPatrick, LLC (ENF) and Entergy Nuclear Operations, Inc. (ENO) dated November 21, 2000, is superseded by Renewed Facility Operating License No. DPR-59, hereby issued to Constellation FitzPatrick and Constellation Energy Generation, LLC (the licensee) to read as follows:
- A. This renewed operating license applies to the James A. FitzPatrick Nuclear Power Plant, a boiling water nuclear reactor and associated equipment (the facility), owned by Constellation FitzPatrick and operated by Constellation Energy Generation, LLC (collectively, the licensees). The facility is located in Scriba, Oswego County, New York, and is described in the "Final Safety Analysis Report," as supplemented and amended, and the Environmental Report, as supplemented and amended.
 - B. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses:
 - (1) Pursuant to Section 104b of the Act and 10 CFR Part 50, "Licensing of Production and Utilization Facilities," (a) Constellation FitzPatrick as the owner to possess and (b) Constellation Energy Generation, LLC as the operator to possess, use, and operate the facility at the designated location in Scriba, Oswego County, New York, in accordance with the procedures and limitations set forth in this renewed operating license;
 - (2) Constellation Energy Generation, LLC, 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) Constellation Energy Generation, 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) Constellation Energy Generation, 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 without restriction to chemical or physical form, for sample analysis or instrument calibration; or associated with radioactive apparatus, components or tools.
- (5) Constellation Energy Generation, LLC, pursuant to the Act and 10 CFR Parts 30 and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of the facility.

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

(1) Maximum Power Level

Constellation Energy Generation, LLC is authorized to operate the facility at steady state reactor core power levels not in excess of 2536 megawatts (thermal).

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 347, are hereby incorporated in the renewed operating license. The licensee shall operate the facility in accordance with the Technical Specifications.

(3) Fire Protection

Constellation Energy Generation, LLC shall implement and maintain in effect all provisions of the approved fire protections program as described in the Final Safety Analysis Report for the facility and as approved in the SER dated November 20, 1972; the SER Supplement No. 1 dated February 1, 1973; the SER Supplement No. 2 dated October 4, 1974; the SER dated August 1, 1979; the SER Supplement dated October 3, 1980; the SER Supplement dated February 13, 1981; the NRC Letter dated February 24, 1981; Technical Specification Amendments 34 (dated January 31, 1978), 80 (dated May 22, 1984), 134 (dated July 19, 1989), 135 (dated September 5, 1989), 142 (dated October 23, 1989), 164 (dated August 10, 1990), 176 (dated January 16, 1992), 177 (dated February 10, 1992), 186 (dated February 19, 1993), 190 (dated June 29, 1993), 191 (dated July 7, 1993), 206 (dated February 28, 1994), and 214 (dated June 27, 1994); and NRC Exemptions and associated safety evaluations dated April 26, 1983, July 1, 1983, January 11, 1985, April 30, 1986, September 15, 1986, and September 10, 1992, subject to the following provision:

Constellation Energy Generation, LLC may make changes to the approved fire protection program without prior approval of the Commission only if those changes would not adversely affect the ability to achieve and maintain safe shutdown in the event of a fire.

(4) Systems Integrity
Deleted by Amendment No. 274

(5) Iodine Monitoring
Deleted by Amendment No. 274

(6) New or Revised ITS Surveillance Requirements Applicability:

The schedule for performing Surveillance Requirements (SRs) that are new or revised in Amendment No. 274 shall be as follows:

- (a) For SRs that are new in this amendment, the first performance is due at the end of the first surveillance interval that begins on the date of implementation of this amendment.
- (b) For SRs that existed prior to this amendment whose intervals of performance are being reduced, the first reduced surveillance interval begins upon completion of the first surveillance performed after implementation of this amendment.
- (c) For SRs that existed prior to this amendment whose intervals of performance are being extended, the first extended surveillance interval begins upon completion of the last surveillance performed prior to implementation of this amendment.

- (d) For SRs that existed prior to this amendment that have modified acceptance criteria, the first performance is due at the end of the first surveillance interval that began on the date the surveillance was last performed prior to the implementation of this amendment.

D. Physical Protection

Constellation Energy Generation, LLC shall fully implement and maintain in effect all provisions of the Commission-approved physical security, training and qualification, and safeguards contingency plans including amendments made pursuant to provisions of the Miscellaneous Amendments and Search Requirements revisions to 10 CFR 73.55 (51 FR 27817 and 27822), and to the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The combined set of plans¹, which contain Safeguards Information protected under 10 CFR 73.21, is entitled: "James A. FitzPatrick Nuclear Power Plant Physical Security, Training & Qualification and Safeguards Contingency Plan, Revision 0," submitted by letter dated October 26, 2004, as supplemented by letter dated May 17, 2006.

Constellation Energy Generation, LLC shall fully implement and maintain in effect all provisions of the Commission-approved cyber security plan (CSP), including changes made pursuant to the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The CSP was approved by License Amendment No. 300, as supplemented by changes approved by License Amendment Nos. 303, 308, 311, and 316.

Constellation Energy Generation, LLC has been granted Commission authorization to use "stand alone preemption authority" under Section 161A of the Atomic Energy Act, 42 U.S.C. 2201a with respect to the weapons described in Attachment 1, Section II contained in its application submitted by letter dated August 30, 2013, as supplemented by letters dated November 12, 2013, and July 11, 2014. Constellation Energy Generation, LLC shall fully implement and maintain in effect the provisions of the Commission-approved authorization.

E. Power Uprate License Amendment Implementation

The licensee shall complete the following actions as a condition of the approval of the power uprate license amendment.

(1) Recirculation Pump Motor Vibration

Perform monitoring of recirculation pump motor vibration during initial Cycle 13 power ascension for uprated power conditions.

(2) Startup Test Program

The licensee will follow a startup testing program, during Cycle 13 power ascension, as described in GE Licensing Topical Report NEDC-31897P-1, "Generic Guidelines for General Electric Boiling Water Reactor Power Uprate."

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

The startup test program includes system testing of such process control systems as the feedwater flow and main steam pressure control systems. The licensee will collect steady-state operational data during various portions of the power ascension to the higher licensed power level so that predicted equipment performance characteristics can be verified. The licensee will do the startup testing program in accordance with its procedures. The licensee's approach is in conformance with the test guidelines of GE Licensing Topical Report NEDC-31897P-1, "Generic Guidelines for General Electric Boiling Water Reactor Power Uprate," June 1991 (proprietary), GE Licensing Topical Report NEDO-31897, "Generic Guidelines for General Electric Boiling Water Reactor Power Uprate," February 1992 (nonproprietary), and NEDC-31897P-AA, Class III (proprietary), May 1992.

(3) Human Factors

The licensee will review the results of the Cycle 13 startup test program to determine any potential effects on operator training. Training issues identified will be incorporated in Licensed Operator training during 1997. Simulator discrepancies identified will be addressed in accordance with simulator Configuration Management procedural requirements.

F. Additional Conditions

The Additional Conditions contained in Appendix C, as revised through Amendment No. 347, are hereby incorporated into this renewed operating license. Constellation Energy Generation, LLC shall operate the facility in accordance with the Additional Conditions.

G. Constellation Energy Generation, LLC shall provide to the Director of the Office of Nuclear Reactor Regulation or the Director of the Office of Nuclear Material Safety and Safeguards, as applicable, a copy of any application, at the time it is filed, to transfer (excluding grants of security interests or liens) from Constellation Energy Generation, LLC to its direct or indirect parent, or to any other affiliated company, facilities for the production, transmission, or distribution of electric energy having a depreciated book value exceeding ten percent (10%) of Constellation Energy Generation, LLC's consolidated net utility plant, as recorded on Constellation Energy Generation, LLC's books of account.

H. DELETED

I. DELETED

J. DELETED

K. DELETED

L. DELETED

M. DELETED

- S. The licensee shall implement and maintain all Actions required by Attachment 2 to NRC Order EA-06-137, issued June 20, 2006, except the last action that requires incorporation of the strategies into the site security plan, contingency plan, emergency plan and/or guard training and qualification plan, as appropriate.
- T. License Renewal – UFSAR supplement submitted pursuant to 10 CFR 54.21(d), as revised during the license renewal application review process, and as supplemented by Appendix A of NUREG-1905, “Safety Evaluation Report Related to the License Renewal of James A. FitzPatrick Nuclear Power Plant,” dated April 2008, describes certain programs to be implemented and activities to be completed prior to the period of extended operation (PEO).
 - a. The licensee shall implement those new programs and enhancements to existing programs no later than the PEO date.
 - b. The licensee shall complete those inspection and testing activities by the PEO date.

The licensee shall notify the NRC in writing within 10 days after having accomplished item (a) above and include the status of those activities that have been or remain to be completed in item (b) above.

- U. UFSAR Supplement Changes - The UFSAR supplement, as revised, submitted pursuant to 10 CFR 54.21(d), shall be included in the next scheduled update to the UFSAR required by the 10 CFR 50.71(e)(4) following the issuance of this renewed operating license. Until that update is complete, the licensee may make changes to the programs and activities described in the supplement without prior Commission approval, provided that the licensee evaluate such changes pursuant to the criteria set forth in 10 CFR 50.59 and otherwise complies with the requirements in that section.
- V. Capsule withdrawal schedule - All capsules in the reactor vessel that are removed and tested must meet the test procedures and reporting requirements of the most recent NRC-approved version of the Boiling Water Reactor Vessel and Internals Project (BWRVIP) Integrated Surveillance Program (ISP) appropriate for the configuration of the specimens in the capsule. Any changes to the capsule withdrawal schedule, including spare capsules, must be approved by the NRC prior to implementation. All capsules placed in storage must be maintained for future insertion. Any changes to storage requirements must be approved by the NRC, as required by 10 CFR Part 50, Appendix H.

- W. Constellation Energy Generation, LLC shall, no later than the date the closing of the transaction approved on November 16, 2021, occurs, enter into a Support Agreement of approximately \$85 million with Constellation FitzPatrick. Constellation FitzPatrick shall not take any action to cause Constellation Energy Generation, LLC, or its successors and assigns, to void, cancel, or materially modify the Constellation Energy Generation, LLC Support Agreement or cause it to fail to perform, or impair its performance under the Constellation Energy Generation, LLC Support Agreement, without the prior written consent of the NRC. The Constellation Energy Generation, LLC Support Agreement may not be amended or modified without 30 days prior written notice to the Director of the Office of Nuclear Reactor Regulation or their designee. An executed copy of the Constellation Energy Generation, LLC Support Agreement shall be submitted to the NRC no later than 30 days after the completion of the proposed transaction. Constellation Energy Generation, LLC shall inform the NRC in writing no later than 14 days after any funds are provided to or for Constellation FitzPatrick under the Constellation Energy Generation, LLC Support Agreement.
3. This renewed operating license is effective as of the date of issuance and shall expire at midnight on October 17, 2034.

FOR THE NUCLEAR REGULATORY COMMISSION

\RA\

Eric J. Leeds, Director
Office of Nuclear Reactor Regulation

Attachments/Appendices:

1. Appendix A - Technical Specifications
2. Appendix B - Deleted
3. Appendix C - Additional Conditions

Date of Issuance: September 8, 2008

5.2 Organization

5.2.2 Plant Staff (continued)

- b. Shift crew composition may be less than the minimum requirement of 10 CFR 50.54(m)(2)(i) and 5.2.2.a and 5.2.2.f for a period of time not to exceed 2 hours in order to accommodate unexpected absence of on duty shift crew members provided immediate action is taken to restore the shift crew composition to within the minimum requirements.
 - c. A radiation protection technician shall be on site when fuel is in the reactor. The position may be vacant for not more than 2 hours, in order to provide for unexpected absence, provided immediate action is taken to fill the required position.
 - d. Deleted
 - e. The operations manager or assistant operations manager shall hold an SRO license.
 - f. When in MODES 1, 2, or 3 an individual shall provide advisory technical support to the unit operations shift crew in the areas of thermal hydraulics, reactor engineering, and plant analysis with regard to the safe operations of the unit. This individual shall meet the qualifications specified in the Constellation Energy Generation, LLC Quality Assurance Topical Report.
-

5.0 ADMINISTRATIVE CONTROLS

5.3 Plant Staff Qualifications

5.3.1 Each member of the unit staff shall meet or exceed the minimum qualifications referenced for comparable positions as specified in the Constellation Energy Generation, LLC Quality Assurance Topical Report.

APPENDIX C
ADDITIONAL CONDITIONS
OPERATING LICENSE NO. DPR-59

Amendment
Number

Additional Conditions

- 243 Constellation Energy Generation, LLC shall describe snubber operation and surveillance requirements in the Final Safety Analysis Report such that future changes to those requirements will be subject to the provisions of 10 CFR 50.59.
- 250 Constellation Energy Generation, LLC shall relocate operability and surveillance requirements for logic bus power monitors, core spray sparger differential pressure, and low pressure coolant injection cross-connect valve position instruments to a licensee-controlled document where future changes to those relocated requirements are controlled under the provisions of 10 CFR 50.59.
- 274 Constellation Energy Generation, LLC shall relocate the Technical Specification requirements identified in Table LA – “Removal of Details Matrix” and Table R – “Relocated Specifications” to licensee-controlled documents, as described in the application, as supplemented on June 12, 2002, and the NRC staff’s Safety Evaluation enclosed with Amendment No. 274, dated July 3, 2002. Further, relocations to the updated Final Safety Analysis Report (UFSAR) shall be reflected in the next UFSAR update required by 10 CFR 50.71(e) following implementation of this amendment.
- 289 Control Room Envelope Habitability
- Upon Implementation of Amendment No. 289, adopting TSTF-448, Revision 3, the determination of control room envelope (CRE) unfiltered air leakage required by SR 3.7.3.3 in accordance with TS 5.5.14.c.(i), the assessment of CRE habitability, as required by Specification 5.5.14.c.(ii), and the measurement of CRE pressure as required by Specification 5.5.14.d shall be considered met. Following implementation:
- (a) The first performance of SR 3.7.3.3 in accordance with Specification 5.5.14.c(i) shall be within the specified Frequency of 6 years, plus the 18-month allowance of SR 3.0.2, as measured from June 28, 2004, the date of the most recent successful tracer gas test, as stated in the licensee’s letter, “NRC Generic Letter 2003-01 Control Room Habitability Initial Action Summary Report” (JAFP-04-0159), dated September 27, 2004, or within 18 months if the time period since the most recent successful tracer gas test is greater than 6 years.



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

CONSTELLATION ENERGY GENERATION, LLC

DOCKET NO. 50-373

LASALLE COUNTY STATION, UNIT 1

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 254
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 February 25, 2021, as supplemented by letters dated March 25, June 11, September 16, and September 29, 2021, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, Renewed Facility Operating License No. NPF-11 is hereby amended as indicated in the attachment to this license amendment.
3. This license amendment is effective as of the date of its issuance and shall be implemented within 15 days of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Bo M. Pham, Director
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Renewed Facility
Operating License

Date of Issuance: February 1, 2022



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

CONSTELLATION ENERGY GENERATION, LLC

DOCKET NO. 50-374

LASALLE COUNTY STATION, UNIT 2

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 240
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 February 25, 2021, as supplemented by letters dated March 25, June 11, September 16, and September 29, 2021, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, Renewed Facility Operating License No. NPF-18 is hereby amended as indicated in the attachment to this license amendment.
3. This license amendment is effective as of the date of its issuance and shall be implemented within 15 days of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Bo M. Pham, Director
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Renewed Facility
Operating License

Date of Issuance: February 1, 2022

ATTACHMENT TO LICENSE AMENDMENT NOS. 254 AND 240

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; Appendix A, Technical Specifications; and Appendix B, Environmental Protection Plan, with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change. Due to the extensive number of changes, the amendment number and issuance date are not duplicated in the left margin of the changed paragraphs.

Remove

Insert

License NPF-11

Page 1
Page 2
Page 3
Page 5
Page 6
Page 10
Page 11

License NPF-11

Page 1
Page 2
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License NPF-18

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License NPF-18

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Appendix A

5.3-1

Appendix A

5.3-1

Appendix B

cover page

Appendix B

cover page



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

CONSTELLATION ENERGY GENERATION, LLC

DOCKET NO. 50-373

LASALLE COUNTY STATION, UNIT 1

RENEWED FACILITY OPERATING LICENSE

Renewed License No. NPF-11

1. The Nuclear Regulatory Commission (the Commission or the NRC) having found that:
 - A. The application for a renewed license filed by the applicant* complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's regulations set forth in 10 CFR Chapter I, and all required notifications to other agencies or bodies have been duly made;
 - B. Construction of the LaSalle County Station, Unit 1 (the facility), has been substantially completed in conformity with Construction Permit No. CPPR-99 and the application, as amended, the provisions of the Act, and the regulations of the Commission;
 - C. The facility will operate in conformity with the application, as amended, the provisions of the Act, and the regulations of the Commission;
 - D. There is reasonable assurance: (i) that the activities authorized by this renewed operating license 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 set forth in 10 CFR Chapter I;
 - E. Constellation Energy Generation, LLC is technically qualified to engage in the activities authorized by this renewed operating license in accordance with the Commission's regulations set forth in 10 CFR Chapter I;
 - F. Constellation Energy Generation, LLC has satisfied the applicable provisions of 10 CFR Part 140, "Financial Protection Requirements and Indemnity Agreements," of the Commission's regulations;
 - G. The issuance of this renewed license will not be inimical to the common defense and security or to the health and safety of the public;

*The Nuclear Regulatory Commission approved the transfer of the license from Commonwealth Edison Company to Exelon Generation Company, LLC on August 3, 2000. The Nuclear Regulatory Commission approved a transaction on November 16, 2021, that resulted in Exelon Generation Company, LLC being renamed Constellation Energy Generation, LLC.

- H. After weighing the environmental, economic, technical, and other benefits of the facility against environmental and other costs and considering available alternatives, the issuance of Renewed Facility Operating License No. NPF-11, subject to the conditions for protection of the environment set forth herein, is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied;
 - I. The receipt, possession, and use of source, byproduct and special nuclear material as authorized by this renewed license will be in accordance with the Commission's regulations in 10 CFR Parts 30, 40 and 70; and
 - J. Actions have been identified and have been or will be taken with respect to (1) managing the effects of aging during the period of extended operation on the functionality of structures and components that have been identified to require review under 10 CFR 54.21(a)(1); and (2) time-limited aging analyses that have been identified to require review under 10 CFR 54.21(c), such that there is reasonable assurance that the activities authorized by this renewed license will continue to be conducted in accordance with the current licensing basis, as defined in 10 CFR 54.3, for the facility, and that any changes made to the facility's current licensing basis in order to comply with 10 CFR 54.29(a) are in accordance with the Act and the Commission's regulations.
2. Based on the foregoing findings regarding this facility, Renewed Facility Operating License NPF-11 is hereby issued to Constellation Energy Generation, LLC (the licensee) to read as follows:
- A. This renewed license applies to the LaSalle County Station, Unit 1, a boiling water nuclear reactor and associated equipment, owned by the licensee. The facility is located in Brookfield Township, LaSalle County, Illinois, and is described in the licensee's "Final Safety Analysis Report," as supplemented and amended, and in the licensee's Environmental Report, as supplemented and amended.
 - B. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses:
 - (1) Constellation Energy Generation, LLC, pursuant to Section 103 of the Act and 10 CFR Part 50, "Licensing of Production and Utilization Facilities," to possess, use, and operate the facility at the designated location in Brookfield Township, LaSalle County, Illinois, in accordance with the procedures and limitations set forth in this renewed license;
 - (2) Constellation Energy Generation, LLC, 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) Constellation Energy Generation, 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) Constellation Energy Generation, 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) Constellation Energy Generation, LLC, pursuant to the Act and 10 CFR Parts 30, 40, and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of LaSalle County Station, Units 1 and 2, and such Class B and Class C low-level radioactive waste as may be produced by the operation of Braidwood Station, Units 1 and 2, Byron Station, Units 1 and 2, and Clinton Power Station, Unit 1.

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

Am. 198
09/16/10

(1) Maximum Power Level

The licensee is authorized to operate the facility at reactor core power levels not in excess of full power (3546 megawatts thermal).

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 254, 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

(23) DELETED

(24) DELETED

Am. 127
06/10/98

(25) Fire Protection Program

The licensee shall implement and maintain all provisions of the approved Fire Protection Program as described in the Final Safety Analysis Report for LaSalle County Station, and as approved in NUREG-0519, "Safety Evaluation Report related to the operation of LaSalle County Station, Units 1 and 2," dated March 1981; Supplement 2 dated February 1982; Supplement 3 dated April 1982; Supplement 5 dated August 1983; Supplement 7 dated December 1983; Supplement 8 dated March 1984; and SERs for the following:

LaSalle Unit 1 License Amendment 1, dated June 18, 1982;
LaSalle Unit 1 License Amendment 18, dated August 8, 1984;
LaSalle Unit 1 License Amendment 23, dated May 22, 1985;
LaSalle Unit 1 License Amendment 44, dated June 20, 1986;
LaSalle Unit 1 License Amendment 127, dated June 10, 1998; and
NRC Evaluation of the Consequences of Postulated Failures of 1 Hour Fire Rated Darmatt KM-1 Fire Barrier under Seismic Loading at LaSalle County Station, dated March 29, 1996.

The Licensee may make changes to the approved Fire Protection Program without prior approval of the Commission only if those changes would not adversely affect the ability to achieve and maintain safe shutdown in the event of a fire.

Am. 14
05/05/83

(26) DELETED

(27) Industrial Security (Section 13.6, SER, SSER #3)

Constellation Energy Generation, LLC shall fully implement and maintain in effect all provisions of the Commission-approved physical security, training and qualification, and safeguards contingency plans including amendments made pursuant to 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 plans,¹ which contain Safeguards Information protected under 10 CFR 73.21, is entitled: "LaSalle County Station Security Plan, Training and Qualification Plan, and Safeguards Contingency Plan, Revision 5," submitted by letter dated May 17, 2006.

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

Constellation Energy Generation, LLC shall fully implement and maintain in effect all provisions of the Commission-approved cyber security plan (CSP), including changes made pursuant to the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The CSP was approved by License Amendment No. 203 and modified by License Amendment No. 216.

(28) DELETED

(29) DELETED

(30) DELETED

(31) DELETED

(32) DELETED

(33) DELETED

Am. 103
04/13/95

(34) DELETED

(35) DELETED

(36) DELETED

Am. 147
03/30/01

(37) DELETED

(38) Constellation Energy Generation, LLC shall provide to the Director of the Office of Nuclear Reactor Regulation or the Director of the Office of Nuclear Material Safety and Safeguards, as applicable, a copy of any application, at the time it is filed, to transfer (excluding grants of security interests or liens) from Constellation Energy Generation, LLC to its direct or indirect parent, or to any other affiliated company, facilities for the production, transmission, or distribution of electric energy having a depreciated book value exceeding ten percent (10%) of Constellation Energy Generation, LLC's consolidated net utility plant, as recorded on Constellation Energy Generation, LLC's books of account.

(47) Adoption of 10 CFR 50.69, "Risk-Informed Categorization and Treatment of Structures, Systems, and Components for Nuclear Power Plants"

Constellation Energy Generation, LLC is approved to implement 10 CFR 50.69 using the processes for categorization of Risk-Informed Safety Class (RISC)-1, RISC-2, RISC-3, and RISC-4 Structures, Systems, and Components (SSCs) using: Probabilistic Risk Assessment (PRA) models to evaluate risk associated with internal events, including internal flooding, and internal fire; the shutdown safety assessment process to assess shutdown risk; the Arkansas Nuclear One, Unit 2 (ANO-2) passive categorization method to assess passive component risk for Class 2 and Class 3 SSCs and their associated supports; the results of the non-PRA evaluations that are based on the IPEEE Screening Assessment for External Hazards updated using the external hazard screening significance process identified in ASME/ANS PRA Standard RA-Sa-2009 for other external hazards except seismic; and the alternative seismic approach as described in the EGC submittal letter dated January 31, 2020, and all its subsequent associated supplements, as specified in License Amendment No. 249 dated May 27, 2021.

The licensee will complete the implementation items listed in Table APLA-01.2 in Attachment 1 of EGC letter to NRC dated October 29, 2020, prior to implementation of 10 CFR 50.69 program. All issues identified will be addressed and any associated changes will be made, focused-scope peer reviews will be performed on changes that are PRA upgrades as defined in the PRA Standard (ASME/ANS RA-Sa-2009, as endorsed by RG 1.200, Revision 2), and any findings will be resolved and reflected in the PRA of record prior to implementation of the 10 CFR 50.69 categorization process.

Prior NRC approval, under 10 CFR 50.90, is required for a change to the categorization process specified above (e.g., change from a seismic margins approach to a seismic probabilistic risk assessment approach).

(48) Adoption of Risk Informed Completion Times TSTF-505, Revision 2, "Provide Risk-Informed Extended Completion Times -RITSTF Initiative 4b"

Constellation Energy Generation, LLC is approved to implement TSTF-505, Revision 2, modifying the Technical Specification requirements related to Completion Times (CT) for Required Actions to provide the option to calculate a longer, risk-informed CT (RICT). The methodology for using the new Risk-Informed Completion Time Program is described in NEI 06-09-A, "Risk-Informed Technical Specifications Initiative 4b, Risk-Managed Technical Specifications (RMTS) Guidelines," Revision 0, which was approved by the NRC on May 17, 2007.

The licensee will complete the implementation item listed in Attachment 5 of Exelon letter to the NRC dated January 31, 2020, prior to implementation of the RICT Program. All issues identified in the attachment will be addressed and any associated changes will be made, focused-scope peer reviews will be performed on changes that are PRA upgrades as defined in the PRA standard (ASME/ANS RA-Sa-2009, as endorsed by RG 1.200, Revision 2), and any findings will be resolved and reflected in the PRA of record prior to implementation of the RICT Program.

Am. 102
03/16/95

D. The facility requires exemptions from certain requirements of 10 CFR Part 50, 10 CFR Part 70, and 10 CFR Part 73. These include:

- (a) Exemptions from certain requirements of Appendices G, H and J and 10 CFR Part 73 are described in the Safety Evaluation Report and Supplement No. 1, No. 2, No. 3 to the Safety Evaluation Report.
- (b) DELETED
- (c) DELETED
- (d) DELETED
- (e) DELETED

Am. 226
11/16/17



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

CONSTELLATION ENERGY GENERATION, LLC

DOCKET NO. 50-374

LASALLE COUNTY STATION, UNIT 2

RENEWED FACILITY OPERATING LICENSE

Renewed License No. NPF-18

1. The Nuclear Regulatory Commission (the Commission or the NRC) having found that:
 - A. The application for a renewed license filed by the applicant* complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's regulations set forth in 10 CFR Chapter I, and all required notifications to other agencies or bodies have been duly made;
 - B. Construction of the LaSalle County Station, Unit 1 (the facility), has been substantially completed in conformity with Construction Permit No. CPPR-100 and the application, as amended, the provisions of the Act, and the regulations of the Commission;
 - C. The facility will operate in conformity with the application, as amended, the provisions of the Act, and the regulations of the Commission (except as exempted from compliance in Section 2.D below);
 - D. There is reasonable assurance: (i) that the activities authorized by this renewed operating license 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 set forth in 10 CFR Chapter I;
 - E. Constellation Energy Generation, LLC is technically qualified to engage in the activities authorized by this renewed license in accordance with the Commission's regulations set forth in 10 CFR Chapter I;
 - F. Constellation Energy Generation, LLC has satisfied the applicable provisions of 10 CFR Part 140, "Financial Protection Requirements and Indemnity Agreements," of the Commission's regulations;

*The Nuclear Regulatory Commission approved the transfer of the license from Commonwealth Edison Company to Exelon Generation Company, LLC on August 3, 2000. The Nuclear Regulatory Commission approved a transaction on November 16, 2021, that resulted in Exelon Generation Company, LLC being renamed Constellation Energy Generation, LLC.

- G. The issuance of this renewed license will not be inimical to the common defense and security or to the health and safety of the public;
 - H. After weighing the environmental, economic, technical, and other benefits of the facility against environmental and other costs and considering available alternatives, the issuance of Renewed Facility Operating License No. NPF-18, subject to the conditions for protection of the environment set forth in the Environmental Protection Plan attached as Appendix B, is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied;
 - I. The receipt, possession, and use of source, byproduct and special nuclear material as authorized by this renewed license will be in accordance with the Commission's regulations in 10 CFR Parts 30, 40 and 70; and
 - J. Actions have been identified and have been or will be taken with respect to (1) managing the effects of aging during the period of extended operation on the functionality of structures and components that have been identified to require review under 10 CFR 54.21(a)(1); and (2) time-limited aging analyses that have been identified to require review under 10 CFR 54.21(c), such that there is reasonable assurance that the activities authorized by this renewed license will continue to be conducted in accordance with the current licensing basis, as defined in 10 CFR 54.3, for the facility, and that any changes made to the facility's current licensing basis in order to comply with 10 CFR 54.29(a) are in accordance with the Act and the Commission's regulations.
2. Based on the foregoing findings regarding this facility, Renewed Facility Operating License NPF-18 is hereby issued to Constellation Energy Generation, LLC (the licensee) to read as follows:
- A. This renewed license applies to the LaSalle County Station, Unit 2, a boiling water nuclear reactor and associated equipment, owned by the licensee. The facility is located in Brookfield Township, LaSalle County, Illinois, and is described in the licensee's "Final Safety Analysis Report," as supplemented and amended, and in the licensee's Environmental Report, as supplemented and amended.
 - B. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses Constellation Energy Generation, LLC:
 - (1) Pursuant to Section 103 of the Act and 10 CFR Part 50, "Licensing of Production and Utilization Facilities," to possess, use, and operate the facility at the designated location in Brookfield Township, LaSalle County, Illinois, in accordance with the procedures and limitations set forth in this renewed license;

- (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) 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. 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.

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 240, 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.

LaSalle Unit 2 License Amendment 11, dated May 22, 1985;
LaSalle Unit 2 License Amendment 14, dated October 2, 1985;
LaSalle Unit 2 License Amendment 112, dated June 10, 1998; and
NRC Evaluation of the Consequences of Postulated Failures of 1 Hour
Fire Rated Darmatt KM-1 Fire Barrier under Seismic Loading at LaSalle
County Station, dated March 29, 1996.

The Licensee may make changes to the approved Fire Protection
Program without prior approval of the Commission only if those changes
would not adversely affect the ability to achieve and maintain safe
shutdown in the event of a fire.

(16) Industrial Security (Section 13.6, SER, SSER #3, SSER #5)

Constellation Energy Generation, LLC shall fully implement and maintain
in effect all provisions of the Commission-approved physical security,
training and qualification, and safeguards contingency plans including
amendments made pursuant to 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: "LaSalle County
Station Security Plan, Training and Qualification Plan, and Safeguards
Contingency Plan, Revision 5," submitted by letter dated May 17, 2006.

Constellation Energy Generation, LLC shall fully implement and maintain
in effect all provisions of the Commission-approved cyber security plan
(CSP), including changes made pursuant to the authority of 10 CFR
50.90 and 10 CFR 50.54(p). The CSP was approved by License
Amendment No. 190 and modified by License Amendment No. 202.

(17) DELETED

(18) DELETED

(19) DELETED

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

(20) DELETED

Am. 133
03/30/01

(21) Deleted.

(22) Constellation Energy Generation, LLC shall provide to the Director of the Office of Nuclear Reactor Regulation or the Director of the Office of Nuclear Material Safety and Safeguards, as applicable, a copy of any application, at the time it is filed, to transfer (excluding grants of security interests or liens) from Constellation Energy Generation, LLC to its direct or indirect parent, or to any other affiliated company, facilities for the production, transmission, or distribution of electric energy having a depreciated book value exceeding ten percent (10%) of Constellation Energy Generation, LLC's consolidated net utility plant, as recorded on Constellation Energy Generation, LLC's books of account.

Am. 229
04/06/20

(23) Deleted.

Am. 229
04/06/20

(24) Deleted.

Am. 229
04/06/20

(25) Deleted.

(26) DELETED

(27) DELETED

3. The licensee shall notify the NRC in writing within 30 days after having accomplished item (b)1 above and include the status of those activities that have been or remain to be completed in item (b)2 above.

(36) Adoption of 10 CFR 50.69, "Risk-Informed Categorization and Treatment of Structures, Systems, and Components for Nuclear Power Plants"

Constellation Energy Generation, LLC is approved to implement 10 CFR 50.69 using the processes for categorization of Risk-Informed Safety Class (RISC)-1, RISC-2, RISC-3, and RISC-4 Structures, Systems, and Components (SSCs) using: Probabilistic Risk Assessment (PRA) models to evaluate risk associated with internal events, including internal flooding, and internal fire; the shutdown safety assessment process to assess shutdown risk; the Arkansas Nuclear One, Unit 2 (ANO-2) passive categorization method to assess passive component risk for Class 2 and Class 3 SSCs and their associated supports; the results of the non-PRA evaluations that are based on the IPEEE Screening Assessment for External Hazards updated using the external hazard screening significance process identified in ASME/ANS PRA Standard RA-Sa-2009 for other external hazards except seismic; and the alternative seismic approach as described in the EGC submittal letter dated January 31, 2020, and all its subsequent associated supplements, as specified in License Amendment No. 235 dated May 27, 2021.

The licensee will complete the implementation items listed in Table APLA-01.2 in Attachment 1 of EGC letter to NRC dated October 29, 2020, prior to implementation of 10 CFR 50.69 program. All issues identified will be addressed and any associated changes will be made, focused-scope peer reviews will be performed on changes that are PRA upgrades as defined in the PRA Standard (ASME/ANS RA-Sa-2009, as endorsed by RG 1.200, Revision 2), and any findings will be resolved and reflected in the PRA of record prior to implementation of the 10 CFR 50.69 categorization process.

Prior NRC approval, under 10 CFR 50.90, is required for a change to the categorization process specified above (e.g., change from a seismic margins approach to a seismic probabilistic risk assessment approach).

(37) Adoption of Risk Informed Completion Times TSTF-505, Revision 2, "Provide Risk-Informed Extended Completion Times -RITSTF Initiative 4b"

Constellation Energy Generation, LLC is approved to implement TSTF-505, Revision 2, modifying the Technical Specification requirements related to Completion Times (CT) for Required Actions to provide the option to calculate a longer, risk-informed CT (RICT). The methodology for using the new Risk-Informed Completion Time Program is described in NEI 06-09-A, "Risk-Informed Technical Specifications Initiative 4b, Risk-Managed Technical Specifications (RMTS) Guidelines," Revision 0, which was approved by the NRC on May 17, 2007.

The licensee will complete the implementation item listed in Attachment 5 of Exelon letter to the NRC dated January 31, 2020, prior to implementation of the RICT Program. All issues identified in the attachment will be addressed and any associated changes will be made, focused-scope peer reviews will be performed on changes that are PRA upgrades as defined in the PRA standard (ASME/ANS RA-Sa-2009, as endorsed by RG 1.200, Revision 2), and any findings will be resolved and reflected in the PRA of record prior to implementation of the RICT Program.

5.0 ADMINISTRATIVE CONTROLS

5.3 Unit Staff Qualifications

- 5.3.1 Each member of the unit staff shall meet or exceed the minimum qualifications referenced for comparable positions as specified in the Constellation Energy Generation, LLC Quality Assurance Topical Report.
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APPENDIX B

TO FACILITY LICENSE NOS. NPF-11 AND NPF-18

LASALLE COUNTY STATION

UNITS 1 AND 2

CONSTELLATION ENERGY GENERATION, LLC

DOCKET NOS. 50-373 AND 50-374

ENVIRONMENTAL PROTECTION PLAN



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

CONSTELLATION ENERGY GENERATION, LLC

DOCKET NO. 50-352

LIMERICK GENERATING STATION, UNIT 1

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 255
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 February 25, 2021, as supplemented by letters dated March 25, June 11, September 16, and September 29, 2021, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, Renewed Facility Operating License No. NPF-39 is hereby amended as indicated in the attachment to this license amendment.
3. This license amendment is effective as of the date of its issuance and shall be implemented within 15 days of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Bo M. Pham, Director
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Renewed Facility
Operating License

Date of Issuance: February 1, 2022

ATTACHMENT TO LICENSE AMENDMENT NO. 255

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; Appendix A, Technical Specifications; Appendix B, Environmental Protection Plan; and Appendix C, Additional Conditions, with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

Remove

Insert

License NPF-39

License NPF-39

Page 1

Page 1

Page 2

Page 2

Page 3

Page 3

Page 4

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Appendix A

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Appendix B

Appendix B

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cover page

Appendix C

Appendix C

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

CONSTELLATION ENERGY GENERATION, LLC

DOCKET NO 50-352

LIMERICK GENERATING STATION, UNIT 1

RENEWED FACILITY OPERATING LICENSE

Renewed License No. NPF-39

1. The Nuclear Regulatory Commission (the Commission or the NRC) has found that:
 - A. The application for renewed license filed by Exelon Generation Company, LLC* complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's regulations set forth in 10 CFR Chapter I, and all required notifications to other agencies or bodies have been duly made;
 - B. Construction of the Limerick Generating Station, Unit 1 (the facility) has been substantially completed in conformity with Construction Permit No. CPPR-106 and the application, as amended, the provisions of the Act and the regulations of the Commission;
 - C. The facility will operate in conformity with the application, as amended, the provisions of the Act, and the regulations of the Commission (except as exempted from compliance in Section 2.D. below);
 - D. There is reasonable assurance: (i) that the activities authorized by this renewed operating license 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 set forth in 10 CFR Chapter I (except as exempted from compliance in Section 2.D. below);
 - E. Constellation Energy Generation, LLC (the licensee) is technically qualified to engage in the activities authorized by this renewed license in accordance with the Commission's regulations set forth in 10 CFR Chapter I;
 - F. The licensee has satisfied the applicable provisions of 10 CFR Part 140, "Financial Protection Requirements and Indemnity Agreements," of the Commission's regulations;

* The Commission approved a transaction on November 16, 2021, that resulted in Exelon Generation Company, LLC being renamed Constellation Energy Generation, LLC.

- G. The issuance of this renewed license will not be inimical to the common defense and security or the health and safety of the public;
 - H. After weighing the environmental, economic, technical, and other benefits of the facility against environmental and other costs and considering available alternatives, the issuance of this Renewed Facility Operating License No. NPF-39, subject to the conditions for protection of the environment set forth in the Environmental Protection Plan attached as Appendix B, is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied; and
 - I. The receipt, possession, and use of source, byproduct and special nuclear material as authorized by this renewed license will be in accordance with the Commission's regulations in 10 CFR Parts 30, 40 and 70.
 - J. Actions have been identified and have been or will be taken with respect to (1) managing the effects of aging during the period of extended operation on the functionality of structures and components that have been identified to require review under 10 CFR 54.21(a)(1), and (2) time-limited aging analyses that have been identified to require review under 10 CFR 54.21(c), such that there is reasonable assurance that the activities authorized by the renewed operating license will continue to be conducted in accordance with the current licensing basis, as defined in 10 CFR 54.3, for the facility, and that any changes made to the facility's current licensing basis in order to comply with 10 CFR 54.29(a) are in accordance with the Act and the Commission's regulations.
2. Based on the foregoing findings, the Partial Initial Decisions issued by the Atomic Safety and Licensing Board dated March 8, 1983, August 29, 1984, May 2, 1985 and July 22, 1985, and the Decision of the Appeal Board dated September 26, 1984, regarding this facility, and approval by the Nuclear Regulatory Commission in its Memorandum and Order dated August 8, 1985, the license for Fuel Loading and Low Power Testing, License No. NPF-27, issued on October 26, 1984, is superseded by Renewed Facility Operating License NPF-39 hereby issued to Constellation Energy Generation, LLC (the licensee), to read as follows:
- A. This renewed license applies to the Limerick Generating Station, Unit 1, a boiling water nuclear reactor and associated equipment, owned by Constellation Energy Generation, LLC. The facility is located on the licensee's site in Montgomery and Chester Counties, Pennsylvania on the banks of the Schuylkill River approximately 1.7 miles southeast of the city limits of Pottstown, Pennsylvania and 21 miles northwest of the city limits of Philadelphia, Pennsylvania, and is described in the licensee's Final Safety Analysis Report, as supplemented and amended, and in the licensee's Environmental Report-Operating License Stage, as supplemented and amended.

- B. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses Constellation Energy Generation, LLC:
- (1) Pursuant to Section 103 of the Act and 10 CFR Part 50, to possess, use, and operate the facility at the designated location in Montgomery and Chester Counties, Pennsylvania, in accordance with the procedures and limitations set forth in this renewed license;
 - (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
Constellation Energy Generation, LLC 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. 255, are hereby incorporated into this renewed license. Constellation Energy Generation, LLC shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

(3) Fire Protection (Section 9.5, SSER-2, -4)*

Constellation Energy Generation, LLC 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 NRC Safety Evaluation Report dated August 1983 through Supplement 9, dated August 1989, and Safety Evaluation dated November 20, 1995, subject to the following provision:

The licensee may make changes to the approved fire protection program without prior approval of the Commission only if those changes would not adversely affect the ability to achieve and maintain safe shutdown in the event of a fire.

The Information contained on FOL pages 5 and 6 were intentionally omitted.

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

(16) Additional Conditions

The Additional Conditions contained in Appendix C, as revised through Amendment No. 255, are hereby incorporated into this renewed license. Constellation Energy Generation, LLC shall operate the facility in accordance with the Additional Conditions.

(17) Constellation Energy Generation, LLC shall provide to the Director of the Office of Nuclear Reactor Regulation or the Director of the Office of Nuclear Material Safety and Safeguards, as applicable, a copy of any application, at the time it is filed, to transfer (excluding grants of security interests or liens) from Constellation Energy Generation, LLC to its direct or indirect parent, or to any other affiliated company, facilities for the production, transmission, or distribution of electric energy having a depreciated book value exceeding ten percent (10%) of Constellation Energy Generation, LLC's consolidated net utility plant, as recorded on Constellation Energy Generation, LLC's books of account.

(18) Deleted.

(19) Deleted.

(20) Deleted.

- (25) The licensee's UFSAR supplement submitted pursuant to 10 CFR 54.21(d), as revised during the license renewal application review process, and as revised in accordance with license condition 2.C.(24), describes certain programs to be implemented and activities to be completed prior to the period of extended operation (PEO).
- (a) Constellation Energy Generation, LLC shall implement those new programs and enhancements to existing programs no later than April 26, 2024.
 - (b) Constellation Energy Generation, LLC shall complete those activities designated for completion prior to the PEO, as noted in Commitment Nos. 18, 19, 20, 22, 23, 24, 28, 29, 30, 38, 39, 40, 41, 42, 43, and 47, of Appendix A of NUREG-2171, "Safety Evaluation Report Related to the License Renewal of Limerick Generating Station, Units 1 and 2," no later than April 26, 2024, or the end of the last refueling outage prior to the period of extended operation, whichever occurs later.
 - (c) Constellation Energy Generation, LLC shall notify the NRC in writing within 30 days after having accomplished item (a) above and include the status of those activities that have been or remain to be completed in item (b) above.

D. The facility requires exemptions from certain requirements of 10 CFR Part 50. These include (a) exemption from the requirement of Appendix J, the testing of containment air locks at times when the containment integrity is not required (Section 6.2.6.1 of the SER and SSER-3), (b) exemption from the requirements of Appendix J, the leak rate testing of the Main Steam Isolation Valves (MSIVs) at the peak calculated containment pressure, Pa, and exemption from the requirements of Appendix J that the measured MSIV leak rates be included in the summation for the local leak rate test (Section 6.2.6 of SSER-3), (c) exemption from the requirement of Appendix J, the local leak rate testing of the Traversing Incore Probe Shear Valves (Section 6.2.6 of the SER and SSER-3). These exemptions are authorized by law and will not endanger life or property or the common defense and security and are otherwise in the public interest. Therefore these exemptions are hereby granted pursuant to 10 CFR 50.12 and 50.47(c). With the granting of these exemptions the facility will operate, to the extent authorized herein, in conformity with the application, as amended, the provision of the Act, and the rules and regulations of the Commission.

- E. Constellation Energy Generation, LLC shall fully implement and maintain in effect all provisions of the Commission-approved physical security, training and qualification, and safeguards contingency plans including amendments made pursuant to 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, submitted by letter dated May 17, 2006, is entitled: "Limerick Generating Station Security Plan, Training and Qualification Plan, and Safeguards Contingency Plan, Revision 2." The set contains Safeguards Information protected under 10 CFR 73.21.

Constellation Energy Generation, LLC shall fully implement and maintain in effect all provisions of the Commission-approved cyber security plan (CSP), including changes made pursuant to the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The CSP was approved by License Amendment No. 204 and modified by License Amendment No. 218.

- F. Deleted
- G. The licensee shall have and maintain financial protection of such type and in such amounts as the Commission shall require in accordance with Section 170 of the Atomic Energy Act of 1954, as amended, to cover public liability claims.
- H. This renewed license is effective as of the date of issuance and shall expire at midnight on October 26, 2044.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

William M. Dean, Director
Office of Nuclear Reactor Regulation

Attachments/Appendices:

1. Attachments 1-2
2. Appendix A - Technical Specifications
3. Appendix B - Environmental Protection Plan
4. Appendix C - Additional Conditions

Date of Issuance: October 20, 2014

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

ADMINISTRATIVE CONTROLS

6.2.3 DELETED. The information from this section is located in the UFSAR.

6.2.4 SHIFT TECHNICAL ADVISOR

6.2.4.1 The Shift Technical Advisor shall provide advisory technical support to Shift Supervision in the areas of thermal hydraulics, reactor engineering, and plant analysis with regard to safe operation of the unit. The Shift Technical Advisor shall meet the qualifications specified by the 1985 NRC Policy Statement on Engineering Expertise on Shift.

6.3 UNIT STAFF QUALIFICATIONS

6.3.1 Each member of the unit staff shall meet or exceed the minimum qualifications referenced for comparable positions as specified in the Constellation Energy Generation, LLC Quality Assurance Topical Report.

APPENDIX B

TO FACILITY OPERATING LICENSE NO. NPF-39

LIMERICK GENERATING STATION

UNIT 1

CONSTELLATION ENERGY GENERATION, LLC

DOCKET NO. 50-352

ENVIRONMENTAL PROTECTION PLAN

(NONRADIOLOGICAL)

APPENDIX C

ADDITIONAL CONDITIONS
OPERATING LICENSE NO. NPF-39

Constellation Energy Generation, LLC shall comply with the following conditions on the schedule noted below:

<u>Amendment No.</u>	<u>Additional Conditions</u>
230, 255	<p>Constellation Energy Generation, LLC is approved to implement 10 CFR 50.69 using the processes for categorization of Risk-Informed Safety Class (RISC)-1, RISC-2, RISC-3, and RISC-4 structures, systems, and components (SSCs) using: Probabilistic Risk Assessment (PRA) models to evaluate risk associated with internal events, including internal flooding, and internal fire; the shutdown safety assessment process to assess shutdown risk; the Arkansas Nuclear One, Unit 2 (ANO-2) passive categorization method to assess passive component risk for Class 2 and Class 3 SSCs and their associated supports; and the results of non-PRA evaluations that are based on the IPEEE Screening Assessment for External Hazards, i.e., seismic margin analysis (SMA) to evaluate seismic risk, and a screening of other external hazards updated using the external hazard screening significance process identified in ASME/ANS PRA Standard RA-Sa-2009; as specified in Unit 1 License Amendment No. 230 dated July 31, 2018.</p> <p>Constellation Energy Generation, LLC will complete the implementation items listed in Attachment 2 of Exelon letter to NRC dated April 23, 2018 prior to implementation of 10 CFR 50.69. All issues identified in the attachment will be addressed and any associated changes will be made, focused-scope peer reviews will be performed on changes that are PRA upgrades as defined in the PRA standard (ASME/ANS RA-Sa-2009, as endorsed by RG 1.200, Revision 2), and any findings will be resolved and reflected in the PRA of record prior to implementation of the 10 CFR 50.69 categorization process.</p> <p>Prior NRC approval, under 10 CFR 50.90, is required for a change to the categorization process specified above (e.g., change from a seismic margins approach to a seismic probabilistic risk assessment approach).</p>



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

CONSTELLATION ENERGY GENERATION, LLC

DOCKET NO. 50-353

LIMERICK GENERATING STATION, UNIT 2

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 217
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 February 25, 2021, as supplemented by letters dated March 25, June 11, September 16, and September 29, 2021, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, Renewed Facility Operating License No. NPF-85 is hereby amended as indicated in the attachment to this license amendment.
3. This license amendment is effective as of the date of its issuance and shall be implemented within 15 days of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Bo M. Pham, Director
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Renewed Facility
Operating License

Date of Issuance: February 1, 2022

ATTACHMENT TO LICENSE AMENDMENT NO. 217

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; Appendix A, Technical Specifications; Appendix B, Environmental Protection Plan; and Appendix C, Additional Conditions, with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

Remove

Insert

License NPF-85

License NPF-85

Page 1

Page 1

Page 2

Page 2

Page 3

Page 3

Page 4

Page 4

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Appendix A

Appendix A

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Appendix B

Appendix B

cover page

cover page

Appendix C

Appendix C

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

CONSTELLATION ENERGY GENERATION, LLC

DOCKET NO. 50-353

LIMERICK GENERATING STATION, UNIT 2

RENEWED FACILITY OPERATING LICENSE

Renewed License No. NPF-85

1. The Nuclear Regulatory Commission (the Commission or the NRC) has found that:
 - A. The application for renewed license filed by Exelon Generation Company, LLC* complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's regulations set forth in 10 CFR Chapter I, and all required notifications to other agencies or bodies have been duly made;
 - B. Construction of the Limerick Generating Station, Unit 2 (the facility) has been substantially completed in conformity with Construction Permit No. CPPR-107 and the application, as amended, the provisions of the Act and the regulations of the Commission;
 - C. The facility will operate in conformity with the application, as amended, the provisions of the Act, and the regulations of the Commission (except as exempted from compliance in Section 2.D. below);
 - D. There is reasonable assurance: (i) that the activities authorized by this renewed operating license 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 set forth in 10 CFR Chapter I (except as exempted from compliance in Section 2.D. below);
 - E. Constellation Energy Generation, LLC (the licensee) is technically qualified to engage in the activities authorized by this renewed license in accordance with the Commission's regulations set forth in 10 CFR Chapter I;
 - F. The licensee has satisfied the applicable provisions of 10 CFR Part 140, "Financial Protection Requirements and Indemnity Agreements," of the Commission's regulations;

* The Commission approved a transaction on November 16, 2021, that resulted in Exelon Generation Company, LLC being renamed Constellation Energy Generation, LLC.

- G. The issuance of this renewed license will not be inimical to the common defense and security or to the health and safety of the public;
 - H. After weighing the environmental, economic, technical, and other benefits of the facility against environmental and other costs and considering available alternatives, the issuance of this Renewed Facility Operating License No. NPF-85, subject to the conditions for protection of the environment set forth in the Environmental Protection Plan attached as Appendix B, is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied; and
 - I. The receipt, possession, and use of source, byproduct and special nuclear material as authorized by this renewed license will be in accordance with the Commission's regulations in 10 CFR Parts 30, 40 and 70.
 - J. Actions have been identified and have been or will be taken with respect to (1) managing the effects of aging during the period of extended operation on the functionality of structures and components that have been identified to require review under 10 CFR 54.21(a)(1), and (2) time-limited aging analyses that have been identified to require review under 10 CFR 54.21(c), such that there is reasonable assurance that the activities authorized by the renewed operating license will continue to be conducted in accordance with the current licensing basis, as defined in 10 CFR 54.3, for the facility, and that any changes made to the facility's current licensing basis in order to comply with 10 CFR 54.29(a) are in accordance with the Act and the Commission's regulations.
2. Based on the foregoing findings and the Decision of the Atomic Safety and Licensing Board, LBP-85-25, dated July 22, 1985, the Commission's Order dated July 7, 1989, and the Commission's Memorandum and Order dated August 25, 1989, regarding this facility, Renewed Facility Operating License NPF-85 is hereby issued to Constellation Energy Generation, LLC (the licensee), to read as follows:
- A. This renewed license applies to the Limerick Generating Station, Unit 2, a boiling water nuclear reactor and associated equipment, owned by Constellation Energy Generation, LLC. The facility is located on the licensee's site in Montgomery and Chester Counties, Pennsylvania on the banks of the Schuylkill River approximately 1.7 miles southeast of the city limits of Pottstown, Pennsylvania and 21 miles northwest of the city limits of Philadelphia, Pennsylvania, and is described in the licensee's Final Safety Analysis Report, as supplemented and amended, and in the licensee's Environmental Report-Operating License Stage, as supplemented and amended.
 - B. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses Constellation Energy Generation, LLC:
 - (1) Pursuant to Section 103 of the Act and 10 CFR Part 50, to possess, use, and operate the facility at the designated location in Montgomery and Chester Counties, Pennsylvania, in accordance with the procedures and limitations set forth in this renewed license;

- (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

Constellation Energy Generation, LLC 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. 217, are hereby incorporated into this renewed license. Constellation Energy Generation, LLC shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

(3) Fire Protection (Section 9.5, SSER-2, -4)*

Constellation Energy Generation, LLC 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 NRC Safety Evaluation Report dated August 1983 through Supplement 9, dated August 1989, and Safety Evaluation dated November 20, 1995, subject to the following provision:

The licensee may make changes to the approved fire protection program without prior approval of the Commission only if those changes would not adversely affect the ability to achieve and maintain safe shutdown in the event of a fire.

(4) Physical Security and Safeguards

Constellation Energy Generation, LLC shall fully implement and maintain in effect all provisions of the Commission-approved physical security, training and qualification, and safeguards contingency plans including amendments made pursuant to 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, submitted by letter dated May 17, 2006, is entitled: "Limerick Generating Station Security Plan, Training and Qualification Plan, and Safeguards Contingency Plan, Revision 2." The set contains Safeguards Information protected under 10 CFR 73.21.

Constellation Energy Generation, LLC shall fully implement and maintain in effect all provisions of the Commission-approved cyber security plan (CSP), including changes made pursuant to the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The CSP was approved by License Amendment No. 166 and modified by License Amendment No. 180.

(5) Constellation Energy Generation, LLC shall provide to the Director of the Office of Nuclear Reactor Regulation or the Director of the Office of Nuclear Material Safety and Safeguards, as applicable, a copy of any application, at the time it is filed, to transfer (excluding grants of security interests or liens) from Constellation Energy Generation, LLC to its direct or indirect parent, or to any other affiliated company, facilities for the production, transmission, or distribution of electric energy having a depreciated book value exceeding ten percent (10%) of Constellation Energy Generation, LLC's consolidated net utility plant, as recorded on Constellation Energy Generation, LLC's books of account.

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

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

- (13) The licensee's UFSAR supplement submitted pursuant to 10 CFR 54.21(d), as revised during the license renewal application review process, and as revised in accordance with license condition 2.C.(12), describes certain programs to be implemented and activities to be completed prior to the period of extended operation (PEO).
- (a) Constellation Energy Generation, LLC shall implement those new programs and enhancements to existing programs no later than December 22, 2028.
 - (b) Constellation Energy Generation, LLC shall complete those activities designated for completion prior to the PEO, as noted in Commitment Nos. 18, 19, 20, 22, 23, 24, 28, 29, 30, 38, 39, 40, 41, 42, 43, and 47, of Appendix A of NUREG-2171, "Safety Evaluation Report Related to the License Renewal of Limerick Generating Station, Units 1 and 2," no later than December 22, 2028, or the end of the last refueling outage prior to the period of extended operation, whichever occurs later.
 - (c) Constellation Energy Generation, LLC shall notify the NRC in writing within 30 days after having accomplished item (a) above and include the status of those activities that have been or remain to be completed in item (b) above.
- (14) The Additional Conditions contained in Appendix C, as revised through Amendment No. 217, are hereby incorporated into this renewed license. Constellation Energy Generation, LLC shall operate the facility in accordance with the Additional Conditions.
- D. The facility requires exemptions from certain requirements of 10 CFR Part 50 and 10 CFR Part 70. These include (a) exemption from the requirement of Appendix J, the testing of containment air locks at times when the containment integrity is not required (Section 6.2.6.1 of the SER and SSER-3), (b) exemption from the requirements of Appendix J, the leak rate testing of the Main Steam Isolation Valves (MSIVs) at the peak calculated containment pressure, Pa, and exemption from the requirements of Appendix J that the measured MSIV leak rates be included in the summation for the local leak rate test (Section 6.2.6.1 of SSER-3), (c) exemption from the requirement of Appendix J, the local leak rate testing of the Traversing Incore Probe Shear Valves (Section 6.2.6.1 of the SER and SSER-3), and (d) an exemption from the schedule requirements of 10 CFR 50.33(k)(l) related to availability of funds for decommissioning the facility (Section 22.1, SSER 8). The special circumstances regarding exemptions (a), (b) and (c) are identified in Sections 6.2.6.1 of the SER and SSER 3. An exemption from the criticality monitoring requirements of 10 CFR 70.24 was previously granted with NRC materials license No. SNM-1977 issued November 22, 1988. The licensee is hereby exempted from the requirements of 10 CFR 70.24 insofar as this requirement applies to the handling and storage of fuel assemblies held under this renewed license.

ADMINISTRATIVE CONTROLS

6.2.3 DELETED. The information from this section is located in the UFSAR.

6.2.4 SHIFT TECHNICAL ADVISOR

6.2.4.1 The Shift Technical Advisor shall provide advisory technical support to Shift Supervision in the areas of thermal hydraulics, reactor engineering, and plant analysis with regard to safe operation of the unit. The Shift Technical Advisor shall meet the qualifications specified by the 1985 NRC Policy Statement on Engineering Expertise on Shift.

6.3 UNIT STAFF QUALIFICATIONS

6.3.1 Each member of the unit staff shall meet or exceed the minimum qualifications referenced for comparable positions as specified in the Constellation Energy Generation, LLC Quality Assurance Topical Report.

APPENDIX B

TO FACILITY OPERATING LICENSE NO. NPF-85

LIMERICK GENERATING STATION

UNIT 2

CONSTELLATION ENERGY GENERATION, LLC

DOCKET NO. 50-353

ENVIRONMENTAL PROTECTION PLAN

(NON-RADIOLOGICAL)

August 25, 1989

APPENDIX C

ADDITIONAL CONDITIONS
OPERATING LICENSE NO. NPF-85

Constellation Energy Generation, LLC shall comply with the following conditions on the schedule noted below:

<u>Amendment No.</u>	<u>Additional Conditions</u>
193, 217	<p>Constellation Energy Generation, LLC is approved to implement 10 CFR 50.69 using the processes for categorization of Risk-Informed Safety Class (RISC)-1, RISC-2, RISC-3, and RISC-4 structures, systems, and components (SSCs) using: Probabilistic Risk Assessment (PRA) models to evaluate risk associated with internal events, including internal flooding, and internal fire; the shutdown safety assessment process to assess shutdown risk; the Arkansas Nuclear One, Unit 2 (ANO-2) passive categorization method to assess passive component risk for Class 2 and Class 3 SSCs and their associated supports; and the results of non-PRA evaluations that are based on the IPEEE Screening Assessment for External Hazards, i.e., seismic margin analysis (SMA) to evaluate seismic risk, and a screening of other external hazards updated using the external hazard screening significance process identified in ASME/ANS PRA Standard RA-Sa-2009; as specified in Unit 2 License Amendment No. 193 dated July 31, 2018.</p> <p>Constellation Energy Generation, LLC will complete the implementation items listed in Attachment 2 of Exelon letter to NRC dated April 23, 2018 prior to implementation of 10 CFR 50.69. All issues identified in the attachment will be addressed and any associated changes will be made, focused-scope peer reviews will be performed on changes that are PRA upgrades as defined in the PRA standard (ASME/ANS RA-Sa-2009, as endorsed by RG 1.200, Revision 2), and any findings will be resolved and reflected in the PRA of record prior to implementation of the 10 CFR 50.69 categorization process.</p> <p>Prior NRC approval, under 10 CFR 50.90, is required for a change to the categorization process specified above (e.g., change from a seismic margins approach to a seismic probabilistic risk assessment approach).</p>



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

NINE MILE POINT NUCLEAR STATION, LLC

CONSTELLATION ENERGY GENERATION, LLC

DOCKET NO. 50-220

NINE MILE POINT NUCLEAR STATION, UNIT 1

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 247
Renewed License No. DPR-63

1. The U.S. Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Exelon Generation Company, LLC dated February 25, 2021, as supplemented by letters dated March 25, June 11, September 16, and September 29, 2021, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, Renewed Facility Operating License No. DPR-63 is hereby amended as indicated in the attachment to this license amendment.
3. This license amendment is effective as of the date of its issuance and shall be implemented within 15 days of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Bo M. Pham, Director
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Renewed Facility
Operating License

Date of Issuance: February 1, 2022

ATTACHMENT TO LICENSE AMENDMENT NO. 247
RENEWED FACILITY OPERATING LICENSE NO. DPR-63
NINE MILE POINT NUCLEAR STATION, UNIT 1
DOCKET NO. 50-220

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

Remove

License DPR-63
Pages 1 through 12

Appendix A
349

Insert

License DPR-63
Page 1 through 12

Appendix A
349



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

NINE MILE POINT NUCLEAR STATION, LLC

CONSTELLATION ENERGY GENERATION, LLC

DOCKET NO. 50-220

NINE MILE POINT NUCLEAR STATION, UNIT 1

RENEWED FACILITY OPERATING LICENSE

Renewed License No. DPR-63

1. The Nuclear Regulatory Commission (NRC or the Commission) having previously made the findings set forth in License No. DPR-63 issued on December 26, 1974, has now found that:
 - A. The application for license, as amended, originally filed by the Niagara Mohawk Power Corporation as supplemented by Nine Mile Point Nuclear Station, LLC (NMP LLC)* complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations as set forth in 10 CFR Chapter I and all required notifications to other agencies or bodies have been duly made;
 - B. Construction of the Nine Mile Point Nuclear Station Unit No. 1 has been substantially completed in conformity with Construction Permit No. CPPR-16 and the application, as amended, the provisions of the Act and the rules and regulations of the Commission;
 - C. Actions have been identified and have been or will be taken with respect to (1) managing the effects of aging during the period of extended operation on the functionality of structures and components that have been identified to require review under 10 CFR 54.21(a)(1); and (2) time-limited aging analyses that have been identified to require review under 10 CFR 54.21(c), such that there is reasonable assurance that the activities authorized by the renewed operating license will continue to be conducted in accordance with the current licensing basis, as defined in 10 CFR 54.3, for the facility, and that any changes made to the facility's current licensing basis in order to comply with 10 CFR 54.29(a) are in accordance with the Act and the Commission's regulations;

* By Order dated October 9, 2009, as superseded by Order dated October 30, 2009, the transfer of this license to Nine Mile Point Nuclear Station, LLC, was approved. By Order dated March 25, 2014, the transfer of the operating authority under this license to Exelon Generation Company, LLC was approved. By Order dated November 16, 2021, a transaction was approved that resulted in Exelon Generation Company, LLC being renamed Constellation Energy Generation, LLC. Unless otherwise noted, references to "the licensee" are to Constellation Energy Generation, LLC as the operating licensee.

- D. The facility will operate in conformity with the application, as amended, the provisions of the Act, and the rules and regulations of the Commission;
 - E. There is reasonable assurance: (i) that the activities authorized by this operating license can be conducted without endangering the health and the safety of the public, and (ii) that such activities will be conducted in compliance with the rules and regulations of the Commission;
 - F. Constellation Energy Generation, LLC and NMP LLC are technically and financially qualified to engage in the activities authorized by this renewed operating license in accordance with the rules and regulations of the Commission;
 - G. Constellation Energy Generation, LLC as operator of the facility and NMP LLC** as owner of the facility have satisfied the applicable provisions of 10 CFR Part 140 "Financial Protection Requirements and Indemnity Agreements" of the Commission's regulations;
 - H. The issuance of this full-term renewed operating license will not be inimical to the common defense and security or to the health and safety of the public;
 - I. After weighing the environmental, economic, technical, and other benefits of the facility against environmental and other costs and considering available alternatives, the adverse environmental impacts of license renewal are not so great that preserving the option of license renewal would be unreasonable and the issuance of the full-term Renewed Facility Operating License No. DPR-63 (subject to the conditions for protection of the environment set forth herein) is in accordance with Appendix D, 10 CFR Part 50 of the Commission's regulations and all applicable requirements have been satisfied; and
 - J. The receipt, possession, and use of source, byproduct and special nuclear material as authorized by this license will be in accordance with the Commission's regulations in 10 CFR Parts 30, 40 and 70 including Section 30.33, 40.32, 70.23 and 70.31.
2. Renewed Facility Operating License No. DPR-63 is hereby issued to Constellation Energy Generation, LLC and Nine Mile Point Nuclear Station, LLC to read as follows:
- A. This license applies to the Nine Mile Point Nuclear Station Unit No. 1, a single cycle, force circulation, boiling light water reactor, and associated equipment (the facility), owned by Nine Mile Point Nuclear Station, LLC. The facility is located on the Nine Mile Point site on the southeast shore of Lake Ontario in Oswego County, New York and is described in the "Final Safety Analysis Report" (with its Amendments Nos. 3 through 13 and its Supplements Nos. 1 through 10) and the "Environmental Report" (with its Supplements Nos. 1 through 3).

** Constellation Energy Generation, LLC is authorized to act for Nine Mile Point Nuclear Station, LLC and has exclusive responsibility and control over the physical possession, operation, and maintenance of the facility.

B. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses:

- (1) Pursuant to Section 104b of the Act and 10 CFR Part 50, "Licensing of Production and Utilization Facilities," (a) NMP LLC to possess and (b) Constellation Energy Generation, LLC to possess, use, and operate the facility at the designated location in Oswego County, New York, in accordance with the procedures and limitations set forth in this amended license;
- (2) Constellation Energy Generation, LLC, 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) Constellation Energy Generation, 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) Constellation Energy Generation, 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 and equipment calibration or associated with radioactive apparatus or components.
- (5) Constellation Energy Generation, LLC, pursuant to the Act and 10 CFR Parts 30 and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of the facility.

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

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

(1) Maximum Power Level

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

(2) Technical Specifications

The Technical Specifications contained in Appendix A, which is attached hereto, as revised through Amendment No. 247, is hereby incorporated into this license. Constellation Energy Generation, LLC shall operate the facility in accordance with the Technical Specifications.

(3) Deleted

D. This license is subject to the following additional conditions:

(1) NMP LLC will complete construction of a new radwaste facility in conformance with the design defined and evaluated in the FES, to be operational no later than June 1976.

(2) Deleted by License Amendment No. 51

(3) Deleted by License Amendment No. 51

(4) Security, Training and Qualification and Safeguards Contingency Plans

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

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

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

(6) Recirculation System Safe-end Replacement

The recirculation system and safe-end replacement program including the cutting and welding of the replacement components and the dose mitigation program (ALARA) is approved, subject to the following conditions:

- a. NMP LLC shall complete the recirculation piping stress reanalysis prior to restart of Nine Mile Point Nuclear Power Station, Unit No. 1. The results of this analysis for selected representative portions of the recirculation system shall be submitted to the NRC prior to restart of the facility.
- b. All fuel and control rods shall be removed from the reactor pressure vessel and stored in the spent fuel pool during the period that work on the safe-end and recirculation system replacement program is in progress.
- c. Constellation Energy Generation, LLC shall update the collective occupational dose estimate weekly. If the updated estimate exceeds the 1908 person-rem estimate by more than 10%, the licensee shall provide a revised estimate, including the reasons for such changes, to the NRC within 15 days of determination.
- d. Progress reports shall be provided at 90-day intervals from June 30, 1982 and due 30 days after close of the interval, with a final report within 60 days after completion of the repair. These reports will conclude:
 - (1) a summary of this occupational dose received to date by major task, and
 - (2) a comparison of estimated doses with the doses actually received.

(7) Fire Protection

Constellation Energy Generation, LLC shall implement and maintain in effect all provisions of the approved fire protection program that comply with 10 CFR 50.48(a) and 10 CFR 50.48(c), as specified in the licensee's amendment request dated June 11, 2012, supplemented by letters dated February 27, March 27, April 30, and December 9, 2013; and January 22, March 14, April 15, May 9, and May 23, 2014 and as approved in the safety evaluation report dated June 30, 2014. Except where NRC approval for changes or deviations is required by 10 CFR 50.48(c), and provided no other regulation, technical specification, license condition or requirement would require prior NRC approval, the licensee may make changes to the fire protection program without prior approval of the

Commission if those changes satisfy the provisions set forth in 10 CFR 50.48(a) and 10 CFR 50.48(c), the change does not require a change to a technical specification or a license condition, and the criteria listed below are satisfied.

(a) Risk-Informed Changes that May Be Made Without Prior NRC Approval

A risk assessment of the change must demonstrate that the acceptance criteria below are met. The risk assessment approach, methods, and data shall be acceptable to the NRC and shall be appropriate for the nature and scope of the change being evaluated; be based on the as-built, as-operated, and maintained plant; and reflect the operating experience at the plant. Acceptable methods to assess the risk of the change may include methods that have been used in the peer-reviewed fire PRA model, methods that have been approved by NRC through a plant-specific license amendment or NRC approval of generic methods specifically for use in NFPA 805 risk assessments, or methods that have been demonstrated to bound the risk impact.

1. Prior NRC review and approval is not required for changes that clearly result in a decrease in risk. The proposed change must also be consistent with the defense-in-depth philosophy and must maintain sufficient safety margins. The change may be implemented following completion of the plant change evaluation.
2. Prior NRC review and approval is not required for individual changes that result in a risk increase less than 1×10^{-7} /year (yr) for CDF and less than 1×10^{-8} /yr for LERF. The proposed change must also be consistent with the defense-in-depth philosophy and must maintain sufficient safety margins. The change may be implemented following completion of the plant change evaluation.

(b) Other Changes that May Be Made Without Prior NRC Approval

1. Changes to NFPA 805, Chapter 3, Fundamental Fire Protection Program

Prior NRC review and approval are not required for changes to the NFPA 805, Chapter 3, fundamental fire protection program elements and design requirements for which an engineering evaluation demonstrates that the alternative to the Chapter 3 element is functionally equivalent or adequate for the hazard. The licensee may use an engineering evaluation to demonstrate that a change to NFPA 805, Chapter 3, element is functionally equivalent to the corresponding technical requirement. A qualified fire protection engineer shall perform the engineering evaluation and conclude that the change has not affected the functionality of the component, system, procedure, or physical arrangement, using a relevant technical requirement or standard. The licensee

may use an engineering evaluation to demonstrate that changes to certain NFPA 805, Chapter 3, elements are acceptable because the alternative is “adequate for the hazard.” Prior NRC review and approval would not be required for alternatives to four specific sections of NFPA 805, Chapter 3, for which an engineering evaluation demonstrates that the alternative to the Chapter 3 element is adequate for the hazard. A qualified fire protection engineer shall perform the engineering evaluation and conclude that the change has not affected the functionality of the component, system, procedure, or physical arrangement, using a relevant technical requirement or standard. The four specific sections of NFPA 805, Chapter 3, are as follows:

- Fire Alarm and Detection Systems (Section 3.8);
- Automatic and Manual Water-Based Fire Suppression Systems (Section 3.9);
- Gaseous Fire Suppression Systems (Section 3.10); and
- Passive Fire Protection Features (Section 3.11).

This License Condition does not apply to any demonstration of equivalency under Section 1.7 of NFPA 805.

2. Fire Protection Program Changes that Have No More than Minimal Risk Impact

Prior NRC review and approval are not required for changes to the licensee’s fire protection program that have been demonstrated to have no more than a minimal risk impact. The licensee may use its screening process as approved in the NRC safety evaluation dated June 30, 2014 to determine that certain fire protection program changes meet the minimal criterion. The licensee shall ensure that fire protection defense-in-depth and safety margins are maintained when changes are made to the fire protection program.

(c) Transition License Conditions

1. Before achieving full compliance with 10 CFR 50.48(c), as specified by (2) below, risk-informed changes to the licensee’s fire protection program may not be made without prior NRC review and approval unless the change has been demonstrated to have no more than a minimal risk impact, as described in (2) above.
2. The licensee shall implement the modifications to its facility, as described in Table S-1, “Plant Modifications Committed,” of NMPNS letter dated May 9, 2014, to complete the transition to full compliance with 10 CFR 50.48(c) prior to startup from the first refueling outage following issuance of the license amendment. The licensee shall maintain appropriate compensatory measures in place until completion of these modifications.

3. The licensee shall implement the items listed in Table S-2, "Implementation Items," of NMPNS letter dated May 9, 2014, 180 days after issuance of the license amendment unless that date falls within a scheduled refueling outage, then the due date will be 60 days following startup from the scheduled refueling outage.

(8) Hot Process Pipe Penetrations

Hot Process Pipe Penetrations in the Emergency Condenser Steam Supply (2 each), Main Steam (2 each), Feedwater (2 each), Cleanup Suction (1 each), and Cleanup Return (1 each) piping systems have been identified as not fully in conformance with FSAR design criteria. This anomaly in design condition from the original design is approved for the duration of Cycle 8 or until March 31, 1986, whichever occurs first, subject to the following conditions:

- (a) An unidentified leakage limit of a change of 1 gallon per minute in 24 hours to permit operation will be imposed by administrative control (Standing Order) at the facility for the interim period.
- (b) NMP LLC shall restore the facility to a condition consistent with the FSAR or provide a change to the FSAR criteria for staff review and approval prior to restart from the forthcoming Cycle 8 outage.

(9) Deleted.

(10) Deleted.

(11) Deleted.

(12) Deleted.

(13) Mitigation Strategy License Condition

Constellation Energy Generation, LLC shall develop and maintain strategies for addressing large fires and explosions and that include the following key areas:

- a. Fire fighting response strategy with the following elements:
 - (1) Pre-defined coordinated fire response strategy and guidance
 - (2) Assessment of mutual aid fire fighting assets
 - (3) Designated staging areas for equipment and materials
 - (4) Command and control
 - (5) Training of response personnel
- b. Operations to mitigate fuel damage considering the following:
 - (1) Protection and use of personnel assets
 - (2) Communications
 - (3) Minimizing fire spread
 - (4) Procedures for implementing integrated fire response strategy
 - (5) Identification of readily-available pre-staged equipment
 - (6) Training on integrated fire response strategy
 - (7) Spent fuel pool mitigation measures
- c. Actions to minimize release to include consideration of:
 - (1) Water spray scrubbing
 - (2) Dose to onsite responders

- (14) Constellation Energy Generation, LLC shall implement and maintain all Actions required by Attachment 2 to NRC Order EA-06-137, issued June 20, 2006, except the last action that requires incorporation of the strategies into the site security plan, contingency plan, emergency plan and/or guard training and qualification plan, as appropriate.

- (15) Upon implementation of Amendment No. 195 adopting TSTF-448, Revision 3, the determination of control room envelope (CRE) unfiltered air leakage as required by TS 4.4.5.g, in accordance with TS 6.5.8.c.(i), the assessment of CRE habitability as required by Specification 6.5.8.c.(ii), and the measurement of CRE pressure as required by Specification 6.5.8.d, shall be considered met. Following implementation:
- (a) The first performance of TS 4.4.5.g, in accordance with Specification 6.5.8.c.(i), shall be within the specified Frequency of 6 years plus the 18-month allowance of TS 4.0.2, as measured from February 19, 2004, the date of the most recent tracer gas test, as stated in the January 31, 2005 letter response to Generic Letter 2003-01, or within the next 18 months if the time period since the most recent tracer gas test is greater than 6 years.
 - (b) The first performance of the periodic assessment of CRE habitability, Specification 6.5.8.c.(ii), shall be within 3 years, plus the 9-month allowance of TS 4.0.2, as measured from February 19, 2004, the date of the most recent tracer gas test, as stated in the January 31, 2005 letter response to Generic Letter 2003-01, or within the next 9 months if the time period since the most recent tracer gas test is greater than 3 years.
 - (c) The first performance of the periodic measurement of CRE pressure, Specification 6.5.8.d, shall be within 24 months, plus the 182 days allowed by TS 4.0.2, as measured from March 1, 2007, the date of the most recent successful pressure measurement test, or within the next 182 days if not performed previously.
- (16) Deleted.

- (17) Constellation Energy Generation, LLC shall, no later than the date the closing of the transaction approved on November 16, 2021, occurs, enter into a Support Agreement of approximately \$128 million with NMP LLC. NMP LLC shall not take any action to cause Constellation Energy Generation, LLC, or its successors and assigns, to void, cancel, or materially modify the Constellation Energy Generation, LLC Support Agreement or cause it to fail to perform, or impair its performance under the Constellation Energy Generation, LLC Support Agreement, without the prior written consent of the NRC. The Constellation Energy Generation, LLC Support Agreement may not be amended or modified without 30 days prior written notice to the Director of the Office of Nuclear Reactor Regulation or their designee. An executed copy of the Constellation Energy Generation, LLC Support Agreement shall be submitted to the NRC no later than 30 days after the completion of the proposed transaction. Constellation Energy Generation, LLC shall inform the NRC in writing no later than 14 days after any funds are provided to or for NMP LLC under the Constellation Energy Generation, LLC Support Agreement.
- (18) Deleted.
- (19) Within 14 days of the closing of the transaction approved on November 16, 2021, Constellation Energy Generation, LLC shall submit to the NRC the Nuclear Operating Services Agreement reflecting the terms set forth in the application dated February 25, 2021. Section 7.1 of the Nuclear Operating Services Agreement may not be modified in any material respect related to financial arrangements that would adversely impact the ability of the licensee to fund safety-related activities authorized by the license without the prior written consent of the Director of the Office of Nuclear Reactor Regulation.
- (20) Deleted.
- (21) Deleted.

- (22) Deleted.
- (23) Deleted
- (24) Deleted
- (25) Constellation Energy Generation, LLC shall provide to the Director of the Office of Nuclear Reactor Regulation or the Director of the Office of Nuclear Material Safety and Safeguards, as applicable, a copy of any application, at the time it is filed, to transfer (excluding grants of security interests or liens) from Constellation Energy Generation, LLC to its direct or indirect parent, or to any other affiliated company, facilities for the production, transmission, or distribution of electric energy having a depreciated book value exceeding ten percent (10%) of Constellation Energy Generation, LLC's consolidated net utility plant, as recorded on Constellation Energy Generation, LLC's books of account.

- e. As a minimum, either the Manager Operations or the General Supervisor Operations shall hold an SRO license.
- f. The Shift Technical Advisor (STA) shall provide advisory technical support to the shift supervision in the areas of thermal hydraulics, reactor engineering, and plant analysis with regard to the safe operation of the unit. In addition, the STA shall meet the qualifications specified by the Commission Policy Statement on Engineering Expertise on Shift.

6.3 Unit Staff Qualifications

6.3.1 Each member of the unit staff shall meet or exceed the minimum qualifications referenced for comparable positions as specified in the Constellation Energy Generation, LLC Quality Assurance Topical Report.

6.4 Procedures

6.4.1 Written procedures and administrative policies shall be established, implemented and maintained that meet or exceed the requirements and recommendations of Sections 5.1 and 5.3 of ANSI N18.7-1972 and cover the following activities:

- a. The applicable procedures recommended in Regulatory Guide 1.33, Appendix A, November 3, 1972;



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

NINE MILE POINT NUCLEAR STATION, LLC

LONG ISLAND LIGHTING COMPANY

CONSTELLATION ENERGY GENERATION, LLC

DOCKET NO. 50-410

NINE MILE POINT NUCLEAR STATION, UNIT 2

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 189
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 February 25, 2021, as supplemented by letters dated March 25, June 11, September 16, and September 29, 2021, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, Renewed Facility Operating License No. NPF-69 is hereby amended as indicated in the attachment to this license amendment.
3. This license amendment is effective as of the date of its issuance and shall be implemented within 15 days of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Bo M. Pham, Director
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Renewed Facility
Operating License

Date of Issuance: February 1, 2022

ATTACHMENT TO LICENSE AMENDMENT NO. 189
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, 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 1
Page 2
Page 3
Page 4
Page 14
Page 15
Page 16
Page 18
Page 19

Appendix A

5.3-1

Insert

License NPF-69

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Page 19

Appendix A

5.3-1



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

NINE MILE POINT NUCLEAR STATION, LLC

LONG ISLAND LIGHTING COMPANY

CONSTELLATION ENERGY GENERATION, LLC

DOCKET NO. 50-410

NINE MILE POINT NUCLEAR STATION, UNIT 2

RENEWED FACILITY OPERATING LICENSE

Renewed License No. NPF-69

1. The Nuclear Regulatory Commission (NRC or the Commission) having previously made the findings set forth in License No. NPF-69 issued on July 2, 1987, has now found that:
 - A. The application for license filed by Nine Mile Point Nuclear Station, LLC* (NMP LLC) 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 and all required notifications to other agencies or bodies have been duly made;
 - B. Construction of the Nine Mile Point Nuclear Station, Unit 2 (the facility) has been substantially completed in conformity with Construction Permit No. CPPR-112 and the application, as amended, the provisions of the Act, and the regulations of the Commission;
 - C. Actions have been identified and have been or will be taken with respect to (1) managing the effects of aging during the period of extended operation on the functionality of structures and components that have been identified to require review under 10 CFR 54.21(a)(1); and (2) time-limited aging analyses that have been identified to require review under 10 CFR 54.21(c), such that there is reasonable assurance that the activities authorized by the renewed operating license will continue to be conducted in accordance with the current licensing basis, as defined in 10 CFR 54.3, for the facility, and that any changes made to the facility's current licensing basis in order to comply with 10 CFR 54.29(a) are in accordance with the Act and the Commission's regulations;

* By Order dated October 9, 2009, as superseded by Order dated October 30, 2009, the transfer of this license to Nine Mile Point Nuclear Station, LLC, was approved. By Order dated March 25, 2014, the transfer of the operating authority under this license to Exelon Generation Company, LLC was approved. By Order dated November 16, 2021, a transaction was approved that resulted in Exelon Generation Company, LLC being renamed Constellation Energy Generation, LLC. Unless otherwise noted, references to "the licensee" are to Constellation Energy Generation, LLC as the operating licensee.

- D. The facility will operate in conformity with the application, as amended, the provisions of the Act, and the rules and regulations of the Commission (except as exempted from compliance in Section 2.0. below);
 - E. There is reasonable assurance: (i) that the activities authorized by this operating license 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 set forth in 10 CFR Chapter I (except as exempted from compliance in Section 2.0. below);
 - F. Constellation Energy Generation, LLC is technically qualified to engage in the activities authorized by this license in accordance with the Commission's regulations set forth in 10 CFR Chapter I;
 - G. Nine Mile Point Nuclear Station, LLC and Long Island Lighting Company, as owners of the facility, and Constellation Energy Generation, LLC, as operator of the facility, have satisfied the applicable provisions of 10 CFR Part 140, "Financial Protection Requirements and Indemnity Agreements," of the Commission's regulations;
 - H. The issuance of this full-term renewed operating license will not be inimical to the common defense and security or to the health and safety of the public;
 - I. After weighing the environmental, economic, technical, and other benefits of the facility against environmental and other costs and considering available alternatives, the adverse environmental impacts of license renewal are not so great that preserving the option of license renewal would be unreasonable and the issuance of Renewed Facility Operating License No. NPF-69, subject to the conditions for protection of the environment set forth in the Environmental Protection Plan attached as Appendix B, is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied; and
 - J. The receipt, possession, and use of source, byproduct, and special nuclear material as authorized by this license will be in accordance with the Commission's regulations in 10 CFR Parts 30, 40, and 70.
2. Renewed Facility Operating License No. NPF-69 is hereby issued to Constellation Energy Generation, LLC, the Nine Mile Point Nuclear Station, LLC and Long Island Lighting Company (the licensees**) to read as follows:
- A. This renewed operating license applies to the Nine Mile Point Nuclear Station, Unit 2, a boiling water nuclear reactor, and associated equipment (the facility) owned by Nine Mile Point Nuclear Station, LLC and Long Island Lighting Company. The facility is located on the owner licensees' site on the southeast shore of Lake Ontario in the town of Scriba, Oswego County, New York and is

** Constellation Energy Generation, LLC is authorized to act as agent for Nine Mile Point Nuclear Station, LLC and Long Island Lighting Company and has exclusive responsibility and control over the physical possession, operation, and maintenance of the facility.

described in the Nine Mile Point Nuclear Station – Unit 2 “Final Safety Analysis Report,” as supplemented and amended, and in the “Environmental Report,” as supplemented and amended.

B. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses:

- (1) Constellation Energy Generation, LLC, pursuant to Section 103 of the Act and 10 CFR Part 50, to possess, use and operate the facility at the above designated location in Oswego County, New York, in accordance with the procedures and limitations set forth in this license;
- (2) NMP LLC and Long Island Lighting Company, pursuant to Section 103 of the Act and 10 CFR Part 50, to possess the facility at the designated location in Oswego County, New York, in accordance with the procedures and limitations set forth in this license;
- (3) Constellation Energy Generation, LLC, 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;
- (4) Constellation Energy Generation, 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;
- (5) Constellation Energy Generation, 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
- (6) Constellation Energy Generation, 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 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 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

Constellation Energy Generation, LLC 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. 189, are hereby incorporated into this license. Constellation Energy Generation, LLC 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.

- (22) Constellation Energy Generation, LLC shall provide to the Director of the Office of Nuclear Reactor Regulation or the Director of the Office of Nuclear Material Safety and Safeguards, as applicable, a copy of any application, at the time it is filed, to transfer (excluding grants of security interests or liens) from Constellation Energy Generation, LLC to its direct or indirect parent, or to any other affiliated company, facilities for the production, transmission, or distribution of electric energy having a depreciated book value exceeding ten percent (10%) of Constellation Energy Generation, LLC's consolidated net utility plant, as recorded on Constellation Energy Generation, LLC's books of account.
- (23) Constellation Energy Generation, LLC shall, no later than the date the closing of the transaction approved on November 16, 2021, occurs, enter into a Support Agreement of approximately \$128 million with NMP LLC. NMP LLC shall not take any action to cause Constellation Energy Generation, LLC, or its successors and assigns, to void, cancel, or materially modify the Constellation Energy Generation, LLC Support Agreement or cause it to fail to perform, or impair its performance under the Constellation Energy Generation, LLC Support Agreement, without the prior written consent of the NRC. The Constellation Energy Generation, LLC Support Agreement may not be amended or modified without 30 days prior written notice to the Director of the Office of Nuclear Reactor Regulation or their designee. An executed copy of the Constellation Energy Generation, LLC Support Agreement shall be submitted to the NRC no later than 30 days after the completion of the proposed transaction. Constellation Energy Generation, LLC shall inform the NRC in writing no later than 14 days after any funds are provided to or for NMP LLC under the Constellation Energy Generation, LLC Support Agreement.
- (24) Deleted.

- (25) Within 14 days of the closing of the transaction approved on November 16, 2021, Constellation Energy Generation, LLC shall submit to the NRC the Nuclear Operating Services Agreement reflecting the terms set forth in the application dated February 25, 2021. Section 7.1 of the Nuclear Operating Services Agreement may not be modified in any material respect related to financial arrangements that would adversely impact the ability of the licensee to fund safety-related activities authorized by the license without the prior written consent of the Director of the Office of Nuclear Reactor Regulation.
- (26) Deleted.
- (27) Deleted.
- (28) Deleted.
- (29) Adoption of Risk Informed Completion Times TSTF-505, Revision 2, "Provide Risk-Informed Extension Completion Times - RITSTF Initiative 4b"

Constellation Energy Generation, LLC is approved to implement TSTF-505, Revision 2, modifying the Technical Specification requirements related to Completion Times (CT) for Required Actions to provide the option to calculate a longer, risk-informed CT (RICT). The methodology for using the new Risk-Informed Completion Time Program is described in NEI 06-09-A, "Risk-Informed Technical Specifications Initiative 4b, Risk-Managed Technical Specifications (RMTS) Guidelines," Revision 0, which was approved by the NRC on May 17, 2007.

Constellation Energy Generation, LLC will complete the implementation items listed in Attachment 6 of Exelon Letter to the NRC dated October 31, 2019, prior to implementation of the RICT Program. All issues identified in the attachment will be addressed and any associated changes will be made, focused-scope peer reviews will be performed on changes that are PRA upgrades as defined in the PRA standard (ASME/ANS RA-Sa-2009, as endorsed by RG 1.200, Revision 2), and any findings will be resolved and reflected in the PRA of record prior to the implementation of the RICT Program.

- (30) Constellation Energy Generation, LLC is approved to implement 10 CFR 50.69 using the processes for categorization of Risk-Informed Safety Class (RISC)-1, RISC-2, RISC-3, and RISC-4 Structures, Systems, and Components (SSCs) using: Probabilistic Risk Assessment (PRA) models to evaluate risk associated with internal events, including internal flooding, and internal fire; the shutdown safety assessment process to assess shutdown risk; the Arkansas Nuclear One, Unit 2 (ANO-2) passive categorization method to assess passive component risk for Class 2 and Class 3 and non-Class SSCs and their associated supports; the results of the non-PRA evaluations that are based on the IPEEE Screening Assessment for External Hazards updated using the external hazard screening significance process identified in ASME/ANS PRA Standard RA-Sa-2009 for other external hazards except seismic; and the alternative seismic approach described in Exelon's submittal letter dated December 26, 2019, and all its subsequent associated supplements as specified in License Amendment No. 183 dated January 29, 2021.

Constellation Energy Generation, LLC will complete the items listed in Attachment 7 of Exelon letter to NRC dated December 26, 2019, prior to implementation of 10 CFR 50.69. All issues identified in the attachment will be addressed and any associated changes will be made, focused-scope peer reviews will be performed on changes that are PRA upgrades as defined in the PRA standard (ASME/ANS RA-Sa-2009, as endorsed by RG 1.200, Revision 2), and any findings will be resolved and reflected in the PRA of record prior to implementation of the 10 CFR 50.69 categorization process.

Prior NRC approval, under 10 CFR 50.90, is required for a change to the categorization process specified above (e.g., change from a seismic margins approach to a seismic probabilistic risk assessment approach).

- D. The facility requires exemptions from certain requirements of 10 CFR Part 50 and 10 CFR Part 70.
- i) An exemption from the critically alarm requirements of 10 CFR Part 70.24 was granted in the Special Nuclear Materials License No. SNM-1895 dated November 27, 1985. This exemption is described in Section 9.1 of Supplement 4 to the SER. This previously granted exemption is continued in this operating license.
 - ii) Exemptions to certain requirements of Appendix J to 10 CFR Part 50 are described in Supplements 3, 4, and 5 to the SER. These include (a) (this item left intentionally blank); (b) an exemption from the requirement of Option B of Appendix J, exempting main steam isolation valve measured leakage from the combined leakage rate limit of 0.6 La. (Section 6.2.6 of SSER 5)*; (c) an exemption from Option B of Appendix J, exempting the

* The parenthetical notation following the discussion of each exemption denotes the section of the Safety Evaluation Report (SER) and/or its supplements wherein the safety evaluation of the exemption is discussed.

With these exemptions, the facility will operate to the extent authorized herein, in conformity with the application, as amended, the provisions of the Act, and the rules and regulations of the Commission.

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

Constellation Energy Generation, LLC shall fully implement and maintain in effect all provisions of the Commission-approved cyber security plan (CSP), including changes made pursuant to the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The Nine Mile Point Nuclear Station's CSP was approved by License Amendment No. 137 and modified by License Amendment No. 149. The licensee has obtained Commission authorization to use Section 161A preemption authority under 42 U.S.C. 2201a for weapons at its facility.

- F. Constellation Energy Generation, LLC shall implement and maintain in effect all provisions of the approved fire protection program as described in the Final Safety Analysis Report for the facility through Amendment No. 27 and as described in submittals dated March 25, May 7 and 9, June 10 and 25, July 11 and 16, August 19 and 22, September 5, 12, and 23, October 10, 21, and 22, and December 9, 1986, and April 10 and May 20, 1987, and as approved in the SER dated February 1985 (and Supplements 1 through 6) subject to the following provision:

Constellation Energy Generation, LLC may make changes to the approved fire protection program without prior approval of the Commission only if those changes would not adversely affect the ability to achieve and maintain safe shutdown in the event of a fire.

- G. The licensees shall have and maintain financial protection of such type and in such amounts as the Commission shall require in accordance with Section 170 of the Atomic Energy Act of 1954, as amended, to cover public liability claims.
- H. This license is effective as of the date of issuance and shall expire at midnight on October 31, 2046.

- I. The UFSAR supplement, as revised, submitted pursuant to 10 CFR 54.21(d), shall be included in the next scheduled update to the USAR required by 10 CFR 50.71(e)(4) following the issuance of this renewed operating license. Until that update is complete, the licensee may make changes to the programs and activities described in the supplement without prior Commission approval, provided that the licensee evaluates such changes pursuant to the criteria set forth in 10 CFR 50.59 and otherwise complies with the requirements in that section.
- J. The UFSAR supplement, as revised, describes certain future activities to be completed prior to the period of extended operation. The licensee shall complete these activities in accordance with Appendix A of NUREG-1900, "Safety Evaluation Report Related to the License Renewal of Nine Mile Point Nuclear Station, Units 1 and 2", dated September 2006, and shall notify the NRC in writing when implementation of these activities is complete and can be verified by NRC inspection.
- K. For the renewed license term, all capsules in the reactor vessel that are removed and tested must meet the test procedures and reporting requirements of the most recent NRC-approved version of the Boiling Water Reactor Vessels and Internals Project (BWRVIP) Integrated Surveillance Program (ISP) appropriate for the configuration of the specimens in the capsule. All capsules placed in storage must be maintained for future insertion. Any changes to storage requirements must be approved by the NRC, as required by 10 CFR Part 50, Appendix H.

FOR THE NUCLEAR REGULATORY COMMISSION

Original Signed by

J. E. Dyer, Director
Office of Nuclear Reactor Regulation

Enclosures:

- 1. Appendix A – Technical Specifications (NUREG-1253)
- 2. Appendix B – Environmental Protection Plan

Date of Issuance: October 31, 2006

5.0 ADMINISTRATIVE CONTROLS

5.3 Unit Staff Qualifications

- 5.3.1 Each member of the unit staff shall meet or exceed the minimum qualifications referenced for comparable positions as specified in the Constellation Energy Generation, LLC Quality Assurance Topical Report.
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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

CONSTELLATION ENERGY GENERATION, LLC

DOCKET NO. 50-171

PEACH BOTTOM ATOMIC POWER STATION, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 17
License No. DPR-12

1. The U.S. Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Exelon Generation Company, LLC dated February 25, 2021, as supplemented by letters dated March 25, June 11, September 16, and September 29, 2021, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, Facility Operating License No. DPR-12 is hereby amended as indicated in the attachment to this license amendment.
3. This license amendment is effective as of the date of its issuance and shall be implemented within 15 days of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Bruce A. Watson, Chief
Reactor Decommissioning Branch
Division of Decommissioning, Uranium
Recovery, and Waste Programs
Office of Nuclear Material Safety
and Safeguards

Attachment:
Changes to the Facility Operating
License

Date of Issuance: February 1, 2022

ATTACHMENT TO LICENSE AMENDMENT NO. 17

FACILITY OPERATING LICENSE NO. DPR-12

PEACH BOTTOM ATOMIC POWER STATION, UNIT 1

DOCKET NO. 50-171

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

Remove

License DPR-12

Page 1

Page 2

Page 3

Appendix A

Page 1

Insert

License DPR-12

Page 1

Page 2

Page 3

Appendix A

Page 1



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

CONSTELLATION ENERGY GENERATION, LLC

DOCKET NO. 50-171

PEACH BOTTOM ATOMIC POWER STATION, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 17
License No. DPR-12

1. The U.S. Nuclear Regulatory Commission (NRC) has found that:
 - A. The application for amendment by Exelon Generation Company, LLC* dated May 21, 2002, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and NRC regulations set forth in 10 CFR Chapter I;
 - B. The facility will be maintained in conformity with the application, the provisions of the Act, and regulations of the NRC;
 - 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 NRC's regulations set forth in 10 CFR Chapter I;
 - D. The licensee is technically and financially qualified to engage in the activities authorized by this amended license in accordance with the rules and regulations of the NRC;
 - E. The licensee has satisfied the applicable provisions of 10 CFR Part 140, "Financial Protection Requirements and Indemnity Agreements" of NRC's regulations;
 - F. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public;
 - G. The issuance of this amendment is in accordance with 10 CFR Part 51 of NRC's regulations and applicable requirements have been satisfied; and

* The NRC approved a transaction on November 16, 2021, that resulted in Exelon Generation Company, LLC being renamed Constellation Energy Generation, LLC. References to "the licensee" are to Constellation Energy Generation, LLC.

- H. The possession and storage of byproduct material as authorized by this amended license will be in accordance with NRC regulations in 10 CFR Part 30, including 10 CFR Section 30.33.
2. Accordingly, the license is amended by changes to License No. DPR-12 and the Technical Specifications as indicated in the attachment to this license amendment and Facility Operating License No. DPR-12 is hereby amended to read as follows:
- A. This amended license applies to the Peach Bottom Atomic Power Station, Unit 1, a permanently shutdown, high temperature, gas cooled, demonstration power reactor, and associated equipment (the facility) owned by Constellation Energy Generation, LLC. The facility is located at the licensee's site in York County, Pennsylvania, and is described in the application dated May 21, 2002.
- B. Subject to the conditions and the requirements incorporated herein, the NRC hereby licenses Constellation Energy Generation, LLC:
- (1) Pursuant to Section 104(b) of the Act and 10 CFR Part 50, "Domestic Licensing of Production and Utilization Facilities" to possess but not operate the facility.
 - (2) Pursuant to the Act and 10 CFR Part 30, "Rules of General Applicability to Domestic Licensing of Byproduct Material" to possess, but not to separate, such byproduct material as may have been produced by operation of the facility.
- C. This license shall be deemed to contain and be subject to the conditions specified in Part 20, Section 30.34 of Part 30, Section 50.59 of Part 50, 10 CFR Chapter I, and to all applicable provisions of the Act and to the rules, regulations, and orders of the NRC now or hereafter in effect and is subject to the additional conditions specified below:
- (1) Constellation Energy Generation, LLC shall not dismantle or dispose of the facility without prior approval of the NRC.
 - (2) Technical Specifications
The Technical Specifications contained in Appendix A as revised through Amendment No. 17 are hereby incorporated in this license. The licensee shall maintain the facility in accordance with the Technical Specifications.

- (3) Constellation Energy Generation, LLC shall provide to the Director of the Office of Nuclear Reactor Regulation or the Director of the Office of Nuclear Material Safety and Safeguards, as applicable, a copy of any application, at the time it is filed, to transfer (excluding grants of security interests or liens) from Constellation Energy Generation, LLC to its direct or indirect parent, or to any other affiliated company, facilities for the production, transmission, or distribution of electric energy having a depreciated book value exceeding ten percent (10%) of Constellation Energy Generation, LLC's consolidated net utility plant, as recorded on Constellation Energy Generation, LLC's books of account.
- (4) Deleted
- (5) Deleted.
- (6) Deleted.

APPENDIX A
to
License No. DPR-12

TECHNICAL SPECIFICATIONS
for
Peach Bottom Atomic Power Station
Unit No. 1

1.0 LOCATION AND SITE

The Peach Bottom Atomic Power Station (PBAPS) Unit No. 1 is located in Peach Bottom Township, Pennsylvania, in the western shore of the Conowingo Pond at the mouth of Rock Run Creek on a site owned by Constellation Energy Generation, LLC. These Technical Specifications apply to the PBAPS Unit No. 1 Exclusion Area. The Exclusion Area shall consist of an area within the PBAPS which is enclosed within locked barriers, and contains the Containment Vessel, Spent Fuel Pool Building and Radwaste Building. The only activity carried on within the Exclusion Area shall be routine and emergency inspections and maintenance associated with the possession of the decommissioned PBAPS Unit No. 1. Peach Bottom Atomic Power Station, Units 2 and 3 are also located on the site.

2.0 ADMINISTRATIVE AND PROCEDURAL SAFEGUARDS

2.1 Administrative Organizations and Controls

(a) Plant Manager

The Peach Bottom Plant Manager shall have the responsibility for administration of all Unit No. 1 functions.

(b) Controls

1. Except when opened to provide egress for inspections, surveys and repairs, the following exclusion area barriers shall be maintained locked:
 - i. The gate in the Exclusion Area fence located outside the containment personnel access lock at Elevation 116' -0".
 - ii. The gate in the Exclusion Area fence located outside the Spent Fuel Pool Area personnel access door at Elevation 116' -0".
 - iii. The gate in the Exclusion Area fence located outside the containment personnel access lock on Elevation 176' -6".
 - iv. Containment personnel access lock at Elevation 116' -0".



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

CONSTELLATION ENERGY GENERATION, LLC

PSEG NUCLEAR, LLC

DOCKET NO. 50-277

PEACH BOTTOM ATOMIC POWER STATION, UNIT 2

AMENDMENT TO SUBSEQUENT RENEWED FACILITY OPERATING LICENSE

Amendment No. 340
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 February 25, 2021, as supplemented by letters dated March 25, June 11, September 16, and September 29, 2021, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, Subsequent Renewed Facility Operating License No. DPR-44 is hereby amended as indicated in the attachment to this license amendment.
3. This license amendment is effective as of the date of its issuance and shall be implemented within 15 days of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Bo M. Pham, Director
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Subsequent Renewed
Facility Operating License

Date of Issuance: February 1, 2022

ATTACHMENT TO LICENSE AMENDMENT NO. 340

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, 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
Pages 1 through 6
Pages 8 through 15

Appendix A
5.0-5

Insert

License DPR-44
Pages 1 through 6
Pages 8 through 15

Appendix A
5.0-5



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

CONSTELLATION ENERGY GENERATION, LLC

PSEG NUCLEAR, LLC

DOCKET NO. 50-277

PEACH BOTTOM ATOMIC POWER STATION, UNIT 2

SUBSEQUENT RENEWED FACILITY OPERATING LICENSE

Subsequent Renewed License No. DPR-44

1. The U.S. Nuclear Regulatory Commission (the Commission) having previously made the findings set forth in Renewed License No. DPR-44 issued May 7, 2003, has now found that:
 - A. The application for Subsequent Renewed Facility Operating License No. DPR-44 filed by Exelon Generation Company, LLC (Exelon)* and PSEG Nuclear LLC (PSEG Nuclear) 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, and all required notifications to other agencies or bodies have been duly made;
 - B. Actions have been identified and have been or will be taken with respect to managing the effects of aging during the subsequent period of extended operation on the functionality of structures and components that have been identified to require review under 10 CFR 54.21(a)(1), and (2) time-limited aging analyses that have been identified to require review under 10 CFR 54.21(c), such that there is reasonable assurance that the activities authorized by this subsequent renewed facility operating license will continue to be conducted in accordance with the current licensing basis, as defined in 10 CFR 54.3, for Peach Bottom Atomic Power Station, Unit No. 2, and that any changes made to the plant's current licensing basis in order to comply with 10 CFR 54.29(a) are in accord with the Act and the Commission's regulations;
 - C. The facility will operate in conformity with the application, as amended, the provisions of the Act, and the rules and regulations of the Commission;

* The NRC approved a transaction on November 16, 2021, that resulted in Exelon Generation Company, LLC being renamed Constellation Energy Generation, LLC. References to "the licensee" are to Constellation Energy Generation, LLC.

- D. There is reasonable assurance: (1) that the activities authorized by this subsequent renewed license can be conducted without endangering the health and safety of the public, and (2) that such activities will be conducted in compliance with the rules and regulations of the Commission;
 - E. Constellation Energy Generation, LLC is technically qualified and Constellation Energy Generation, LLC and PSEG Nuclear are financially qualified to engage in the activities authorized by this subsequent renewed license in accordance with the rules and regulations of the Commission;
 - F. Constellation Energy Generation, LLC and PSEG Nuclear have satisfied the applicable provisions of 10 CFR Part 140, "Financial Protection Requirements and indemnity Agreements," of the Commission's regulations;
 - G. The issuance of this subsequent renewed license will not be inimical to the common defense and security or to the health and safety of the public;
 - H. After weighing the environmental, economic, technical, and other benefits of the facility against environmental costs and considering available alternatives, the Commission concludes that the issuance of the Subsequent Renewed Facility Operating License No. DPR-44 is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied; and
 - I. The receipt, possession, and use of source, byproduct, and special nuclear material as authorized by the subsequent renewed license will be in accordance with the Commission's regulations in 10 CFR Parts 30, 40, and 70, including 10 CFR Sections 30.33, 40.32, 70.23 and 70.31.
2. On the basis of the foregoing findings regarding this facility, Renewed Facility Operating License No. DPR-44, issued May 7, 2003, is superseded by Subsequent Renewed Facility Operating License No. DPR-44, which is hereby issued to Constellation Energy Generation, LLC and PSEG Nuclear to read as follows:
- A. This subsequent renewed facility operating license applies to the Peach Bottom Atomic Power Station, Unit 2, a single-cycle, forced-circulation boiling water nuclear reactor and associated equipment (the facility), owned by Constellation Energy Generation, LLC and PSEG Nuclear and operated by Constellation Energy Generation, LLC. The facility is located partly in Peach Bottom Township, York County, partly in Drumore Township, Lancaster County, and partly in Fulton Township, Lancaster County in southeastern Pennsylvania and is described in the Final Safety Analysis Report as supplemented and amended and the Environmental Report as supplemented and amended.
 - B. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses:

- (1) Constellation Energy Generation, LLC, pursuant to Section 104b of the Act and 10 CFR Part 50, "Licensing of Production and Utilization Facilities," to possess, use, and operate the facility and PSEG Nuclear to possess the facility at the designated location in Peach Bottom, York County, Pennsylvania in accordance with the procedures and limitations set forth in this license;
- (2) Constellation Energy Generation, LLC, 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) Constellation Energy Generation, 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) Constellation Energy Generation, 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 when associated with radioactive apparatus or components;
- (5) Constellation Energy Generation, LLC, 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

Constellation Energy Generation, LLC 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. 340, are hereby incorporated in the license. Constellation Energy Generation, LLC shall operate the facility in accordance with the Technical Specifications.

(3) Physical Protection

Constellation Energy Generation, LLC shall fully implement and maintain in effect all provisions of the Commission-approved physical security, training and qualification, and safeguards contingency plans including amendments made pursuant to 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, submitted by letter dated May 17, 2006, is entitled: "Peach Bottom Atomic Power Station Security Plan, Training and Qualification Plan, Safeguards Contingency Plan, and Independent Spent Fuel Storage Installation Security Program, Revision 3." The set contains Safeguards Information protected under 10 CFR 73.21.

Constellation Energy Generation, LLC shall fully implement and maintain in effect all provisions of the Commission-approved cyber security plan (CSP), including changes made pursuant to the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The CSP was approved by License Amendment No. 281 and modified by Amendment No. 301.

(4) Fire Protection

Constellation Energy Generation, LLC 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 NRC Safety Evaluation Report (SER) dated May 23, 1979, and Supplements dated August 14, September 15, October 10 and November 24, 1980, and in the NRC SERs dated September 16, 1993, and August 24, 1994, subject to the following provision:

Constellation Energy Generation, LLC may make changes to the approved fire protection program without prior approval of the Commission only if those changes would not adversely affect the ability to achieve and maintain safe shutdown in the event of a fire.

(5) Public Service Electric & Gas Company (PSE&G) to PSEG Nuclear License Transfer Conditions

- (a) Deleted.
- (b) Deleted.
- (c) PSEG Nuclear shall not take any action that would cause PSEG Power LLC or its parent companies to void, cancel, or diminish the commitment to fund an extended plant shutdown as represented in the application for approval of the transfer of this license from PSE&G to PSEG Nuclear.

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

(6) Constellation Energy Generation, LLC shall provide to the Director of the Office of Nuclear Reactor Regulation or the Director of the Office of Nuclear Material Safety and Safeguards, as applicable, a copy of any application, at the time it is filed, to transfer (excluding grants of security interests or liens) from Constellation Energy Generation, LLC to its direct or indirect parent, or to any other affiliated company, facilities for the production, transmission, or distribution of electric energy having a depreciated book value exceeding ten percent (10%) of Constellation Energy Generation, LLC's consolidated net utility plant, as recorded on Constellation Energy Generation, LLC's books of account.

(7) Deleted.

(8) Deleted.

(9) Deleted.

(10) Additional Conditions of the Renewed License

(a) Updated Final Safety Analysis Report

The Updated Final Safety Analysis Report supplement, as revised on January 31, 2003, shall be included in the next scheduled update to the Updated Final Safety Analysis Report required by 10 CFR 50.71(e)(4) following the issuance of the renewed license. Until that update is complete, the licensee may make changes to the programs described in the supplement without prior Commission approval, provided that the licensee evaluates each such change pursuant to the criteria set forth in 10 CFR 50.59 and otherwise complies with the requirements in that section.

(b) Future Inspection Activities

The Updated Final Safety Analysis Report supplement submitted pursuant to 10 CFR 54.21(d), as revised on January 31, 2003, describes certain future inspection activities to be completed before the period of extended operation. The licensee shall complete these activities no later than August 8, 2013, and shall notify the NRC in writing when implementation of these activities is complete and can be verified by NRC inspection.

(c) Integrated Surveillance Program

Constellation Energy Generation, LLC shall implement an NRC staff-approved reactor vessel integrated surveillance program for the extended period of operation which satisfies the requirements of 10 CFR Part 54. Such a program will be implemented through a staff-approved Boiling Water Reactor Vessel and Internals Project program or through a staff-approved plant-specific program. Before August 8, 2013, the licensee will notify the NRC of its decision to implement the integrated surveillance program or a plant-specific

program, and provide the appropriate revisions to the Updated Final Safety Analysis Report Supplement summary descriptions of the vessel surveillance material testing program.

(d) Core Shroud Inspection and Evaluation Guidelines Program

Constellation Energy Generation, LLC shall implement an NRC staff-approved core shroud inspection and evaluation guidelines program for the extended period of operation which satisfies the requirements of 10 CFR Part 54. Such a program will be implemented through a staff-approved Boiling Water Reactor Vessel and Internals Project program or through a staff-approved plant-specific program. Before August 8, 2013, the licensee will notify the NRC of its decision to implement the core shroud inspection and evaluation guidelines program or a plant-specific program and provide the appropriate revisions to the Updated Final Safety Analysis Report Supplement summary descriptions of the core shroud inspection and evaluation guidelines program.

(11) Mitigation Strategy License Condition

Develop and maintain strategies for addressing large fires and explosions and that include the following key areas:

- (a) Fire fighting response strategy with the following elements:
 - 1. Pre-defined coordinated fire response strategy and guidance
 - 2. Assessment of mutual aid fire fighting assets
 - 3. Designated staging areas for equipment and materials
 - 4. Command and control
 - 5. Training of response personnel
- (b) Operations to mitigate fuel damage considering the following:
 - 1. Protection and use of personnel assets
 - 2. Communications
 - 3. Minimizing fire spread
 - 4. Procedures for implementing integrated fire response strategy
 - 5. Identification of readily-available pre-staged equipment
 - 6. Training on integrated fire response strategy
 - 7. Spent fuel pool mitigation measures
- (c) Actions to minimize release to include consideration of:
 - 1. Water spray scrubbing
 - 2. Dose to onsite responders

(12) The licensee shall implement and maintain all Actions required by Attachment 2 to NRC Order EA-06-137, issued June 20, 2006, except the last action that requires incorporation of the strategies into the site security plan, contingency plan, emergency plan and/or guard training and qualification plan, as appropriate.

(13) Deleted

gauges (180 degrees apart) at any of the eight MSL locations, the licensee will stop power ascension and repair/replace the damaged strain gauges and only then resume power ascension. In addition, sufficient on-dryer strain gauges must remain in working order to monitor all dryer peak stress locations with a minimum alternating stress ratio (MASR) less than 1.5. In the event there are no working on-dryer strain gauges, with coherence of greater than 0.5 with any peak stress location, the licensee will: (1) stop power ascension; (2) evaluate the dryer MASR at the current power level and at the projected EPU power level; and (3) provide the results to the NRC Project Manager via e-mail. The licensee shall not resume power ascension for at least 24 hours after the NRC Project Manager confirms receipt of the MASR results unless, prior to the expiration of the 24 hour period, the NRC Project Manager advises that the NRC staff has no objections to the continuation of power ascension. Furthermore, power ascension may only resume if the licensee determines that the dryer MASR will remain greater than 1.0.

1. The licensee shall provide a brief stress summary report for the replacement steam dryer (RSD) based on MSL strain gauge and on-dryer instrument data collected at or near 3514 MWt for NRC review before increasing power above 3514 MWt. The licensee shall also provide a brief vibration summary report for piping and valve vibration data collected at or near 3514 MWt for NRC review before increasing power above 3514 MWt. Both summary reports shall be provided by e-mail to the NRC Project Manager. The licensee shall not increase power above 3514 MWt for at least 240 hours after the NRC Project Manager confirms receipt of the reports unless, prior to expiration of the 240 hour period, the NRC Project Manager advises that the NRC staff has no objections to the continuation of power ascension. The stress summary report shall include the information in items a through f, and the vibration summary report shall include the information in items g through i, as follows:
 - a. A comparison of predicted and measured pressure spectra plots on the RSD.
 - b. A comparison of predicted and measured root mean square (RMS) strains and spectra plots on the RSD.
 - c. End-to-end bias errors and uncertainties (B/Us) for RSD strains, along with a demonstration that the application of these B/Us leads to RSD strain simulations that bound the measured spectra at dominant frequencies and RMS strains at all active strain gauge locations.
 - d. RSD strain gauge limits based on benchmarking performed near 3514 MWt. This will include the predicted

- RSD strains at each measured location and the corresponding updated MASR near 3514 MWt.
- e. Predicted (extrapolated) strains at the active RSD strain gauge locations at 104% of 3514 MWt and an evaluation against acceptance limits.
 - f. Predicted RSD stresses and MASRs at EPU.
 - g. Vibration data for piping and valve locations deemed prone to vibration and vibration monitoring locations identified in Attachment 13 to the EPU application dated September 28, 2012, and Supplement 16 dated December 20, 2013, including the following locations: MSLs (including those in the drywell, turbine building and in the steam tunnel), Feedwater Lines (including those in the drywell and turbine building), Safety Relief Valves (SRVs) and Main Steam Isolation Valves in the drywell.
 - h. An evaluation of the measured vibration data collected in item 1.g above compared against acceptance limits.
 - i. Predicted vibration values and associated acceptance limits at approximately 104 percent, 108 percent, and 112.4 percent of 3514 MWt using the data collected in item 1.g above.
2. The licensee shall monitor the RSD strain gauges during power ascension above 3514 MWt for increasing strain fluctuations. Upon the initial increase of power above 3514 MWt until reaching 3951 MWt, the licensee shall collect data from the RSD strain gauges at nominal 2 percent thermal power increments and evaluate steam dryer stress ratios based on these data. Summaries of the results shall be provided via e-mail to the NRC Project Manager at approximately 104 percent and 108 percent of 3514 MWt.
 3. The licensee shall monitor the MSL strain gauges during power ascension above 3514 MWt for increasing pressure fluctuations in the main steam lines. Upon the initial increase of power above 3514 MWt until reaching 3951 MWt, the licensee shall collect data from the MSL strain gauges and on-dryer instruments at nominal 2 percent thermal power increments.
 4. The licensee shall hold the facility at approximately 104 percent and 108 percent of 3514 MWt to perform the following:
 - a. Collect strain data from the MSL strain gauges and collect data from on-dryer instruments (accelerometers, strain gauges, and pressure transducers).

- b. Collect vibration data for the locations included in the vibration summary report discussed above.
 - c. Evaluate steam dryer performance based on RSD strain gauge data.
 - d. Evaluate the measured vibration data (collected in item 4.b above) at that power level, data projected to EPU conditions, trends, and comparison with the acceptance limits.
 - e. Provide the steam dryer evaluation and the vibration evaluation, including the data collected, via e-mail to the NRC Project Manager, upon completion of the evaluation for each of the two hold points.
 - f. The licensee shall submit a comparison of predicted and measured pressures and strains (RMS and spectra) on the RSD at 104% of 3514 MWt and 108% of 3514 MWt during power ascension.
 - g. The licensee shall not increase power above each hold point until 96 hours after the NRC Project Manager confirms receipt of the evaluations unless, prior to the expiration of the 96 hour period, the NRC Project Manager advises that the NRC staff has no objections to the continuation of power ascension.
5. If any RMS level measured by the active RSD strain gauges exceeds allowable Level 1 limits, the licensee shall return the facility to a power level at which the limit(s) is not exceeded. The licensee shall resolve the discrepancy, evaluate and document the continued structural integrity of the steam dryer, and provide that documentation to the NRC Project Manager via e-mail prior to further increases in reactor power. If a revised stress analysis is performed and new RSD strain limits are developed, then the licensee shall not further increase power above each hold point until 96 hours after the NRC Project Manager confirms receipt of the documentation or until the NRC Project Manager advises that the NRC staff has no objections to the continuation of power ascension, whichever comes first. Additional detail is provided in paragraph (b)1 below.
- (b) The licensee shall implement the following actions for the initial power ascension from 3514 MWt to 3951 MWt condition:
- 1. In the event that RMS strain levels for active RSD strain gauges are identified to exceed the allowable Level 1 limits during power ascension above 3514 MWt, the licensee shall re-evaluate dryer loads and stresses, and re-establish updated

MASRs and RSD strain gauge RMS limits. In the event that stress analyses are re-performed based on new strain gauge data to address paragraph (a)5 above, the revised load definition, stress analysis, and limits shall include:

- a. Determination of end-to-end B/Us and their application in determining maximum alternating stress intensities.
 - b. Use of bump-up factors associated with all of the SRV acoustic resonances, as determined from the scale model test results or in-plant data acquired during power ascension.
2. After reaching 3951 MWt, the licensee shall obtain measurements from the MSL strain gauges and establish the steam dryer flow-induced vibration load fatigue margin for the facility, update the dryer stress report, and re-establish the RSD strain gauge limits based on the updated load definition. These data will be provided to the NRC staff as described below in paragraph (e).
- (c) The licensee shall prepare the EPU power ascension test procedure to include:
1. The stress limits and the corresponding RSD strain limits to be applied for evaluating steam dryer performance.
 2. Specific hold points and their durations during EPU power ascension.
 3. Activities to be accomplished during the hold points.
 4. Plant parameters to be monitored.
 5. Inspections and walkdowns to be conducted for steam, feedwater, and condensate systems and components during the hold points.
 6. Methods to be used to trend plant parameters.
 7. Acceptance criteria for monitoring and trending plant parameters, and conducting the walkdowns and inspections.
 8. Actions to be taken if acceptance criteria are not satisfied.
 9. Verification of the completion of commitments and planned actions specified in the application and all supplements to the application in support of the EPU license amendment request pertaining to the steam dryer prior to power increase above 3514 MWt. The licensee shall provide the related EPU startup

test procedure sections to the NRC Project Manager via e-mail prior to increasing power above 3514 MWt.

- (d) The following key attributes of the program for verifying the continued structural integrity of the steam dryer shall not be made less restrictive without prior NRC approval:
 - 1. During initial power ascension testing above 3514 MWt, each of the two hold points shall be at increments of 4 percent of 3514 MWt.
 - 2. Level 1 performance criteria.
 - 3. The methodology for establishing the RSD strain limits used for the Level 1 and Level 2 performance.
- (e) The results of the power ascension testing to verify the continued structural integrity of the steam dryer shall be submitted to the NRC staff in a report in accordance with 10 CFR 50.4. The report shall include a final load definition and stress report of the steam dryer, including the results of a complete re-analysis using the end-to-end B/Us determined at EPU conditions and a comparison of predicted and measured pressures and strains (RMS levels and spectra) on the RSD. The report shall be submitted within 90 days of the completion of EPU power ascension testing for Peach Bottom Unit 2.
- (f) During the first two scheduled refueling outages after reaching EPU conditions, a visual inspection shall be conducted of the steam dryer as described in the inspection guidelines contained in WCAP-17635-P.
- (g) The results of the visual inspections of the steam dryer shall be submitted to the NRC staff in a report in accordance with 10 CFR 50.4. The report shall be submitted within 90 days following startup from each of the first two respective refueling outages.
- (h) Within 6 months following completion of the second refueling outage, after the implementation of the EPU, the licensee shall submit a long-term steam dryer inspection plan based on industry operating experience along with the baseline inspection results.

The license condition described above shall expire: (1) upon satisfaction of the requirements in paragraphs (f) and (g), provided that a visual inspection of the steam dryer does not reveal any new unacceptable flaw(s) or unacceptable flaw growth that is due to fatigue, and; (2) upon satisfaction of the requirements specified in paragraph (h).

(16) Maximum Extended Load Line Limit Analysis Plus (MELLLA+) Special Consideration

The licensee shall not operate the facility within the MELLLA+ operating domain with a feedwater heater out of service resulting in more than a 10°F reduction in feedwater temperature below the design feedwater temperature.

(17) Adoption of 10 CFR 50.69, "Risk-informed Categorization and Treatment of Structures, Systems, and Components for Nuclear Power Plants"

In support of implementing License Amendment No. 321 permitting the adoption of the provisions of 10 CFR 50.69 for Renewed Facility Operating License No. DPR-44 for Peach Bottom Unit 2, the license is amended to add the following license condition:

- (a) The licensee is approved to implement 10 CFR 50.69 using the processes for categorization of Risk-Informed Safety Class (RISC)-1, RISC-2, RISC-3, and RISC-4 structures, systems, and components (SSCs) using: Probabilistic Risk Assessment (PRA) models to evaluate risk associated with internal events, including internal flooding, and internal fire; the shutdown safety assessment process to assess shutdown risk; the Arkansas Nuclear One, Unit 2 (ANO-2) passive categorization method to assess passive component risk for Class 2 and Class 3 SSCs and their associated supports; and the results of non-PRA evaluations that are based on the IPEEE Screening Assessment for External Hazards, i.e., seismic margin analysis (SMA) to evaluate seismic risk, and a screening of other external hazards updated using the external hazard screening significance process identified in ASME/ANS PRA Standard RA-Sa 2009; as specified in Unit 2 License Amendment No. 321 dated October 25, 2018.

The licensee will complete the implementation items listed in Attachment 2 of Exelon's letter to the NRC dated June 6, 2018, prior to implementation of 10 CFR 50.69. All issues identified in the attachment will be addressed and any associated changes will be made, focused-scope peer reviews will be performed on changes that are PRA upgrades as defined in the PRA standard (ASME/ANS RA-Sa-2009, as endorsed by RG 1.200, Revision 2), and any findings will be resolved and reflected in the PRA of record prior to implementation of the 10 CFR 50.69 categorization process.

Prior NRC approval, under 10 CFR 50.90, is required for a change to the categorization process specified above (e.g., change from a seismic margins approach to a seismic probabilistic risk assessment approach).

- (18) This subsequent renewed license is subject to the following conditions for the protection of the environment:
- (a) To the extent matters related to thermal discharges are treated therein, operation of Peach Bottom Atomic Power Station Unit No. 2 will be governed by NPDES Permit No. PA 0009733, as now in effect and as hereafter amended. Questions pertaining to conformance thereto shall be referred to and shall be determined by the NPDES Permit issuing or enforcement authority, as appropriate.
 - (b) In the event of any modification of the NPDES Permit related to thermal discharges or the establishment (or amendment) of alternative effluent limitations established pursuant to Section 316 of the Federal Water Pollution Control Act, the licensee shall inform the NRC and analyze any associated changes in or to the Station, its components, its operation or in the discharge of effluents therefrom. If such change would entail any modification to this license, or any Technical Specifications which are part of this license, or require NRC approval pursuant to 10 CFR 50.59 or involve an environmental impact different than analyzed in the Final Environmental Statement, the licensee shall file with the NRC, as applicable, an appropriate analysis of any such change on facility safety, and/or an analysis of any such change on the environmental impacts and on the overall cost-benefit balance for facility operation set forth in the Final Environmental Statement and a request for an amendment to the operating license, if required by the Commission's regulations. As used in this Condition (18)(b), Final Environmental Statement (FES) means the NRC Staff Final Environmental Statement related to Operation of Peach Bottom Atomic Power Station Units Nos. 2 and 3 dated April 1973, as modified by (1) the Initial Decision of the Atomic Safety and Licensing Board dated September 14, 1973, (2) the Supplemental Initial Decision of the Atomic Safety and Licensing Board dated June 14, 1974, (3) the Decision of the Atomic Safety and Licensing Appeal Board dated July 5, 1974, (4) the Memorandum and Order of the Commission dated August 8, 1974, (5) any further modification resulting from further review by the Appeal Board and by the Commission, if any, and (6) any Environmental Impact Appraisal which has been or may be issued by the NRC since the FES was published in April 1973.

(19) Subsequent Renewed License Conditions.

- (a) The information in the Updated Final Safety Analysis Report (UFSAR) supplement submitted pursuant to 10 CFR 54.21(d), as revised during the subsequent license renewal application review process, and commitments as listed in Appendix A of the "Safety Evaluation Report Related to the Subsequent License Renewal of Peach Bottom Atomic Power Station, Units 2 and 3," dated February 2020, are collectively the "Subsequent License Renewal UFSAR Supplement." This Supplement is henceforth part of the UFSAR, which will be updated in accordance with 10 CFR 50.71(e). As such,

the licensee may make changes to the programs, activities, and commitments described in the Subsequent License Renewal UFSAR Supplement, provided the licensee evaluates such changes pursuant to the criteria set forth in 10 CFR 50.59, "Changes, Tests, and Experiments," and otherwise complies with the requirements in that section.

- (b) The Subsequent License Renewal UFSAR Supplement, as defined in subsequent renewed license condition (19)(a) above, describes programs to be implemented and activities to be completed prior to the subsequent period of extended operation, which is the period following the August 8, 2033, expiration of the initial renewed license.
1. Constellation Energy Generation, LLC shall implement those new programs and enhancements to existing programs no later than 6 months before the subsequent period of extended operation.
 2. Constellation Energy Generation, LLC shall complete those activities by the 6-month date prior to the subsequent period of extended operation or by the end of the last refueling outage before the subsequent period of extended operation, whichever occurs later.
 3. Constellation Energy Generation, LLC shall notify the NRC in writing within 30 days after having accomplished item (b)1 above and include the status of those activities that have been or remain to be completed in item (b)2 above.

(20) PRA Model Updates to Support Implementation of the Risk Informed Completion Time (RICT) Program

Constellation Energy Generation, LLC is approved to implement TSTF-505, Revision 2, modifying the Technical Specification requirements related to Completion Times (CT) for Required Actions to provide the option to calculate a longer, risk-informed CT. The methodology for using the new Risk-Informed Completion Time (RICT) Program is described in NEI 06-09-A, "Risk- Informed Technical Specifications Initiative 4b, Risk-Managed Technical Specifications (RMTS) Guidelines," Revision 0, which was approved by the NRC on May 17, 2007.

Constellation Energy Generation, LLC will complete the implementation items listed in Attachment 6 of Exelon letter to the NRC dated May 29, 2020, prior to implementation of the RICT Program. All issues identified in the attachment will be addressed and any associated changes will be made, focused-scope peer reviews will be performed on changes that are PRA upgrades as defined in the PRA standard (ASME/ANS RA-Sa-2009, as endorsed by RG 1.200, Revision 2), and any findings will be resolved and reflected in the PRA of record prior to implementation of the RICT Program.

5.0 ADMINISTRATIVE CONTROLS

5.3 Unit Staff Qualifications

- 5.3.1 Each member of the unit staff shall meet or exceed the minimum qualifications referenced for comparable positions as specified in the Constellation Energy Generation, LLC Quality Assurance Topical Report.
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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

CONSTELLATION ENERGY GENERATION, LLC

PSEG NUCLEAR, LLC

DOCKET NO. 50-278

PEACH BOTTOM ATOMIC POWER STATION, UNIT 3

AMENDMENT TO SUBSEQUENT RENEWED FACILITY OPERATING LICENSE

Amendment No. 343
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 February 25, 2021, as supplemented by letters dated March 25, June 11, September 16, and September 29, 2021, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, Subsequent Renewed Facility Operating License No. DPR-56 is hereby amended as indicated in the attachment to this license amendment.
3. This license amendment is effective as of the date of its issuance and shall be implemented within 15 days of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Bo M. Pham, Director
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Subsequent Renewed
Facility Operating License

Date of Issuance: February 1, 2022

ATTACHMENT TO LICENSE AMENDMENT NO. 343

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, 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
Pages 1 through 6
Pages 8 through 11
Pages 13 through 15

Appendix A
5.0-5

Insert

License DPR-56
Pages 1 through 6
Pages 8 through 11
Pages 13 through 15

Appendix A
5.0-5



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

CONSTELLATION ENERGY GENERATION, LLC

PSEG NUCLEAR, LLC

DOCKET NO. 50-278

PEACH BOTTOM ATOMIC POWER STATION, UNIT 3

SUBSEQUENT RENEWED FACILITY OPERATING LICENSE

Subsequent Renewed License No. DPR-56

1. The U.S. Nuclear Regulatory Commission (the Commission) having previously made the findings set forth in Renewed License No. DPR-56 issued May 7, 2003 has now found that:
 - A. The application for Subsequent Renewed Facility Operating License No. DPR-56 filed by Exelon Generation Company, LLC (Exelon)* and PSEG Nuclear LLC (PSEG Nuclear) 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, and all required notifications to other agencies or bodies have been duly made;
 - B. Actions have been identified and have been or will be taken with respect to (1) managing the effects of aging during the subsequent period of extended operation on the functionality of structures and components that have been identified to require review under 10 CFR 54.21(a)(1), and (2) time-limited aging analyses that have been identified to require review under 10 CFR 54.21(c), such that there is reasonable assurance that the activities authorized by this subsequent renewed license will continue to be conducted in accordance with the current licensing basis, as defined in 10 CFR 54.3, for Peach Bottom Atomic Power Station, Unit No. 3, and that any changes made to the plant's current licensing basis in order to comply with 10 CFR 54.29(a) are in accord with the Act and the Commission's regulations;
 - C. The facility will operate in conformity with the application, as amended, the provisions of the Act, and the rules and regulations of the Commission;
 - D. There is reasonable assurance: (1) that the activities authorized by this subsequent renewed license can be conducted without endangering the health

* The Commission approved a transaction on November 16, 2021, that resulted in Exelon Generation Company, LLC being renamed Constellation Energy Generation, LLC. References to "the licensee" are to Constellation Energy Generation, LLC.

and safety of the public, and (2) that such activities will be conducted in compliance with the rules and regulations of the Commission;

- E. Constellation Energy Generation, LLC is technically qualified and Constellation Energy Generation, LLC and PSEG Nuclear are financially qualified to engage in the activities authorized by this subsequent renewed license in accordance with the rules and regulations of the Commission;
 - F. Constellation Energy Generation, LLC and PSEG Nuclear have satisfied the applicable provisions of 10 CFR Part 140, "Financial Protection Requirements and Indemnity Agreements," of the Commission's regulations;
 - G. The issuance of this subsequent renewed license will not be inimical to the common defense and security or to the health and safety of the public;
 - H. After weighing the environmental, economic, technical, and other benefits of the facility against environmental costs and considering available alternatives, the Commission concludes that the issuance of Subsequent Renewed Facility Operating License No. DPR-56 is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied; and
 - I. The receipt, possession, and use of source, byproduct, and special nuclear material as authorized by the subsequent renewed license will be in accordance with the Commission's regulations in 10 CFR Parts 30, 40, and 70, including 10 CFR Sections 30.33, 40.32, 70.23 and 70.31.
2. On the basis of the forgoing findings regarding this facility, Renewed Facility Operating License No. DPR-56, issued May 7, 2003, is superseded by Subsequent Renewed Facility Operating License No. DPR-56, which is hereby issued to Constellation Energy Generation, LLC and PSEG Nuclear to read as follows:
- A. This subsequent renewed license applies to the Peach Bottom Atomic Power Station, Unit 3, a single-cycle, forced-circulation boiling water nuclear reactor and associated equipment (the facility), owned by Constellation Energy Generation, LLC and PSEG Nuclear and operated by Constellation Energy Generation, LLC. The facility is located partly in Peach Bottom Township, York County, partly in Drumore Township, Lancaster County, and partly in Fulton Township, Lancaster County in southeastern Pennsylvania, and is described in the Final Safety Analysis Report as supplemented and amended and the Environmental Report as supplemented and amended.
 - B. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses:
 - (1) Constellation Energy Generation, LLC, pursuant to Section 104b of the Act and 10 CFR Part 50, "Licensing of Production and Utilization Facilities," to possess, use, and operate the facility and PSEG Nuclear to possess the facility at the designated location in Peach Bottom, York County,

Pennsylvania in accordance with the procedures and limitations set forth in this license;

- (2) Constellation Energy Generation, LLC, 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) Constellation Energy Generation, 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) Constellation Energy Generation, 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 when associated with radioactive apparatus or components;
- (5) Constellation Energy Generation, LLC, 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

Constellation Energy Generation, LLC 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. 343, are hereby incorporated in the license. Constellation Energy Generation, LLC shall operate the facility in accordance with the Technical Specifications.

(3) Physical Protection

Constellation Energy Generation, LLC shall fully implement and maintain in effect all provisions of the Commission-approved physical security, training and qualification, and safeguards contingency plans including amendments made pursuant to 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 submitted by letter dated May 17, 2006, is entitled: "Peach Bottom Atomic Power Station Security Plan, Training and Qualification Plan, Safeguards Contingency Plan, and Independent Spent Fuel Storage Installation Security Program, Revision 3." The set contains Safeguards Information protected under 10 CFR 73.21.

Constellation Energy Generation, LLC shall fully implement and maintain in effect all provisions of the Commission-approved cyber security plan (CSP), including changes made pursuant to the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The CSP was approved by License Amendment No. 283 and modified by Amendment No. 304.

(4) Fire Protection

Constellation Energy Generation, LLC 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 NRC Safety Evaluation Report (SER) dated May 23, 1979, and Supplements dated August 14, September 15, October 10 and November 24, 1980, and in the NRC SERs dated September 16, 1993, and August 24, 1994, subject to the following provision:

Constellation Energy Generation, LLC may make changes to the approved fire protection program without prior approval of the Commission only if those changes would not adversely affect the ability to achieve and maintain safe shutdown in the event of a fire.

(5) Public Service Electric & Gas Company (PSE&G) to PSEG Nuclear License Transfer Conditions

- (a) Deleted.
- (b) Deleted.
- (c) PSEG Nuclear, shall not take any action that would cause PSEG Power, LLC or its parent companies to void, cancel, or diminish the commitment to fund an extended plant shutdown as represented in the application for approval of the transfer of this license from PSE&G to PSEG Nuclear.

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

(6) Constellation Energy Generation, LLC shall provide to the Director of the Office of Nuclear Reactor Regulation or the Director of the Office of Nuclear Material Safety and Safeguards, as applicable, a copy of any application, at the time it is filed, to transfer (excluding grants of security interests or liens) from Constellation Energy Generation, LLC to its direct or indirect parent, or to any other affiliated company, facilities for the production, transmission, or distribution of electric energy having a depreciated book value exceeding ten percent (10%) of Constellation Energy Generation, LLC's consolidated net utility plant, as recorded on Constellation Energy Generation, LLC's books of account.

(7) Deleted.

(8) Deleted.

(9) Deleted.

(10) Additional Conditions of the Renewed License

(a) Updated Final Safety Analysis Report

The Updated Final Safety Analysis Report supplement, as revised on January 31, 2003, shall be included in the next scheduled update to the Updated Final Safety Analysis Report required by 10 CFR 50.71(e)(4) following the issuance of this renewed license. Until that update is complete, the licensee may make changes to the programs described in the supplement without prior Commission approval, provided that the licensee evaluates each such change pursuant to the criteria set forth in 10 CFR 50.59 and otherwise complies with the requirements in that section.

(b) Future Inspection Activities

The Updated Final Safety Analysis Report supplement submitted pursuant to 10 CFR 54.21(d), as revised on January 31, 2003, describes certain future inspection activities to be completed before the period of extended operation. The licensee shall complete these activities no later than July 2, 2014, and shall notify the NRC in writing when implementation of these activities is complete and can be verified by NRC inspection.

(c) Integrated Surveillance Program

Constellation Energy Generation, LLC shall implement an NRC staff-approved reactor vessel integrated surveillance program for the extended period of operation which satisfies the requirements of 10 CFR Part 54. Such a program will be implemented through a staff-approved Boiling Water Reactor Vessel and Internals Project program or through a staff-approved plant-specific program. Before July 2, 2014, the licensee will notify the NRC of its decision to implement the integrated surveillance program or a plant-specific

program, and provide the appropriate revisions to the Updated Final Safety Analysis Report Supplement summary descriptions of the vessel surveillance material testing program.

(d) Core Shroud Inspection and Evaluation Guidelines Program

Constellation Energy Generation, LLC shall implement an NRC staff-approved core shroud inspection and evaluation guidelines program for the extended period of operation which satisfies the requirements of 10 CFR Part 54. Such a program will be implemented through a staff-approved Boiling Water Reactor Vessel and Internals Project program or through a staff-approved, plant-specific program. Before July 2, 2014, the licensee will notify the NRC of its decision to implement the core shroud inspection and evaluation guidelines program or a plant-specific program, and provide the appropriate revisions to the Updated Final Safety Analysis Report Supplement summary descriptions of the core shroud inspection and evaluation guidelines program.

(11) Mitigation Strategy License Condition

Develop and maintain strategies for addressing large fires and explosions and that include the following key areas:

- (a) Fire fighting response strategy with the following elements:
 - 1. Pre-defined coordinated fire response strategy and guidance
 - 2. Assessment of mutual aid fire fighting assets
 - 3. Designated staging areas for equipment and materials
 - 4. Command and control
 - 5. Training of response personnel
- (b) Operations to mitigate fuel damage considering the following:
 - 1. Protection and use of personnel assets
 - 2. Communications
 - 3. Minimizing fire spread
 - 4. Procedures for implementing integrated fire response strategy
 - 5. Identification of readily-available pre-staged equipment
 - 6. Training on integrated fire response strategy
 - 7. Spent fuel pool mitigation measures
- (c) Actions to minimize release to include consideration of:
 - 1. Water spray scrubbing
 - 2. Dose to onsite responders

(12) The licensee shall implement and maintain all Actions required by Attachment 2 to NRC Order EA-06-137, issued June 20, 2006, except the last action that requires incorporation of the strategies into the site security plan, contingency plan, emergency plan and/or guard training and qualification plan, as appropriate.

(13) Deleted

license condition. This license condition provides for monitoring, evaluating, and taking prompt action in response to potential adverse flow effects as a result of power uprate operation on plant structures, systems, and components (including verifying the continued structural integrity of the steam dryer). This license condition is applicable to the initial power ascension from 3514 MWt to the extended power uprate (EPU) power level of 3951 MWt:

- (a) The following requirements are placed on the initial operation of the facility, above the thermal power level of 3514 MWt, for the power ascension to 3951 MWt. These conditions are applicable until the first time full EPU conditions (3951 MWt) are achieved. If the number of active main steam line (MSL) strain gauges is less than two strain gauges (180 degrees apart) at any of the eight MSL locations, the licensee will stop power ascension and repair/replace the damaged strain gauges and only then resume power ascension.
 1. At least 30 days prior to the start of the Peach Bottom Unit 3 EPU outage, the licensee shall revise the Peach Bottom Unit 3 replacement steam dryer (RSD) analysis utilizing the Unit 2 on-dryer strain gauge based end-to-end Bias errors and Uncertainties (B/Us) at EPU conditions, and submit the information including the updated limit curves and a list of dominant frequencies for Unit 3, to the NRC as a report in accordance with 10 CFR 50.4.
 2. The licensee shall evaluate the Unit 3 limit curves prepared in (a)1 above based on new MSL strain gauge data collected following the Unit 3 EPU outage at or near 3514 MWt. If the limit curves change, the new post-EPU outage limit curves shall be provided by e-mail to the NRC Project Manager. The licensee shall not increase power above 3514 MWt for at least 96 hours after the NRC Project Manager confirms receipt of the reports unless, prior to expiration of the 96 hour period, the NRC Project Manager advises that the NRC staff has no objections to the continuation of power ascension.
 3. The licensee shall provide a brief vibration summary report, for piping and valves vibration data collected at or near 3514 MWt, for NRC review before increasing power above 3514 MWt. The summary report shall be provided by e-mail to the NRC Project Manager. The licensee shall not increase power above 3514 MWt for at least 96 hours after the NRC Project Manager confirms receipt of the report unless, prior to expiration of the 96 hour period, the NRC Project Manager advises that the NRC staff has no objections to the continuation of power ascension. The vibration summary report shall include the information in items a through c, as follows:
 - a. Vibration data for piping and valve locations deemed prone to vibration and vibration monitoring locations

identified in Attachment 13 to the EPU application dated September 28, 2012, and Supplement 16 dated December 20, 2013, including the following locations: MSLs (including those in the drywell, turbine building and in the steam tunnel), Feedwater Lines (including those in the drywell and turbine building), Safety Relief Valves (SRVs) and the Main Steam Isolation Valves in the drywell.

- b. An evaluation of the measured vibration data collected in item 3.a above compared against acceptance limits.
 - c. Predicted vibration values and associated acceptance limits at approximately 104 percent, 108 percent and 112.4 percent of 3514 MWt using the data collected in item 3.a above.
4. The licensee shall monitor the MSL strain gauges during power ascension above 3514 MWt for increasing pressure fluctuations in the steam lines. Upon the initial increase of power above 3514 MWt until reaching 3951 MWt, the licensee shall collect data from the MSL strain gauges at nominal 2 percent thermal power increments and evaluate steam dryer performance based on this data.
5. During power ascension at each nominal 2 percent power level above 3514 MWt, the licensee shall compare the MSL data to the approved limit curves based on end-to-end B/Us from the Peach Bottom Unit 2 benchmarking at EPU conditions and determine the minimum alternating stress ratio (MASR). A summary of the results shall be provided for NRC review at approximately 104 percent and 108 percent of 3514 MWt. The summary report shall be provided to the NRC Project Manager via e-mail.
6. The licensee shall hold the facility at approximately 104 percent and 108 percent of 3514 MWt to perform the following:
 - a. Collect strain data from the MSL strain gauges.
 - b. Collect vibration data for the locations included in the vibration summary report discussed above.
 - c. Evaluate steam dryer performance based on MSL strain gauge data.
 - d. Evaluate the measured vibration data (collected in item 6.b above) at that power level, data projected to EPU conditions, trends, and comparison with the acceptance limits.

- e. Provide the steam dryer evaluation and the vibration evaluation, including the data collected, via e-mail to the NRC Project Manager, upon completion of the evaluation for each of the hold points.
 - f. The licensee shall not increase power above each hold point until 96 hours after the NRC Project Manager confirms receipt of the evaluations unless, prior to the expiration of the 96 hour period, the NRC Project Manager advises that the NRC staff has no objections to the continuation of power ascension.
7. If any frequency peak from the MSL strain gauge data exceeds the Level 1 limit curves, the licensee shall return the facility to a power level at which the limit curve is not exceeded. The licensee shall resolve the discrepancy, evaluate and document the continued structural integrity of the steam dryer, and provide that documentation to the NRC Project Manager via e-mail prior to further increases in reactor power. If a revised stress analysis is performed and new limit curves are developed, then the licensee shall not further increase power above each hold point until 96 hours after the NRC Project Manager confirms receipt of the documentation or until the NRC Project Manager advises that the NRC staff has no objections to the continuation of power ascension, whichever comes first. Additional detail is provided in paragraph (b)1 below.
- (b) The licensee shall implement the following actions for the initial power ascension from 3514 MWt to 3951 MWt condition:
- 1. In the event that acoustic signals (in MSL strain gauge signals) are identified that exceed the Level 1 limit curves during power ascension above 3514 MWt, the licensee shall re-evaluate dryer loads and stresses, and re-establish the limit curves. In the event that stress analyses are reperformed based on new strain gauge data to address paragraph (a)7 above, the revised load definition, stress analysis, and limit curves shall include:
 - a. Application of end-to-end B/Us as determined from Peach Bottom Unit 2 EPU measurements.
 - b. Use of bump-up factors associated with all of the SRV acoustic resonances as determined from the scale model test results or in-plant data acquired during power ascension.
 - 2. After reaching 3951 MWt, the licensee shall obtain measurements from the MSL strain gauges and establish the steam dryer flow-induced vibration load fatigue margin for the facility, update the dryer stress report, and re-establish the limit

curves with the updated load definition. These data will be provided to the NRC staff as described below in paragraph (e).

- (c) The licensee shall prepare the EPU power ascension test procedure to include:
 - 1. The MSL strain gage limit curves to be applied for evaluating steam dryer performance, based on end-to-end B/Us from Peach Bottom Unit 2 benchmarking at EPU conditions.
 - 2. Specific hold points and their durations during EPU power ascension.
 - 3. Activities to be accomplished during the hold points.
 - 4. Plant parameters to be monitored.
 - 5. Inspections and walkdowns to be conducted for steam, feedwater, and condensate systems and components during the hold points
 - 6. Methods to be used to trend plant parameters.
 - 7. Acceptance criteria for monitoring and trending plant parameters, and conducting the walkdowns and inspections.
 - 8. Actions to be taken if acceptance criteria are not satisfied.
 - 9. Verification of the completion of commitments and planned actions specified in the application and all supplements to the application in support of the EPU license amendment request pertaining to the steam dryer prior to power increase above 3514 MWt. The licensee shall provide the related EPU startup test procedure sections to the NRC Project Manager via e-mail prior to increasing power above 3514 MWt.

- (d) The following key attributes of the program for verifying the continued structural integrity of the steam dryer shall not be made less restrictive without prior NRC approval:
 - 1. During initial power ascension testing above 3514 MWt, each of the two hold points shall be at increments of approximately 4 percent of 3514 MWt.

- (a) The licensee is approved to implement 10 CFR 50.69 using the processes for categorization of Risk-Informed Safety Class (RISC)-1, RISC-2, RISC-3, and RISC-4 structures, systems, and components (SSCs) using: Probabilistic Risk Assessment (PRA) models to evaluate risk associated with internal events, including internal flooding, and internal fire; the shutdown safety assessment process to assess shutdown risk; the Arkansas Nuclear One, Unit 2 (ANO-2) passive categorization method to assess passive component risk for Class 2 and Class 3 SSCs and their associated supports; and the results of non-PRA evaluations that are based on the IPEEE Screening Assessment for External Hazards, i.e., seismic margin analysis (SMA) to evaluate seismic risk, and a screening of other external hazards updated using the external hazard screening significance process identified in ASME/ANS PRA Standard RA-Sa-2009; as specified in Unit 3 License Amendment No. 324 dated October 25, 2018.

The licensee will complete the implementation items listed in Attachment 2 of Exelon's letter to the NRC dated June 6, 2018, prior to implementation of 10 CFR 50.69. All issues identified in the attachment will be addressed and any associated changes will be made, focused-scope peer reviews will be performed on changes that are PRA upgrades as defined in the PRA standard (ASME/ANS RA-Sa-2009, as endorsed by RG 1.200, Revision 2), and any findings will be resolved and reflected in the PRA of record prior to implementation of the 10 CFR 50.69 categorization process.

Prior NRC approval, under 10 CFR 50.90, is required for a change to the categorization process specified above (e.g., change from a seismic margins approach to a seismic probabilistic risk assessment approach).

- (18) This subsequent renewed license is subject to the following conditions for the protection of the environment:
 - (a) To the extent matters related to thermal discharges are treated therein, operation of Peach Bottom Atomic Power Station, Unit No. 3, will be governed by NPDES Permit No. PA 0009733, as now in effect and as hereafter amended. Questions pertaining to conformance thereto shall be referred to and shall be determined by the NPDES Permit issuing or enforcement authority, as appropriate.
 - (b) In the event of any modification of the NPDES Permit related to thermal discharges or the establishment (or amendment) of alternative effluent limitations established pursuant to Section 316 of the Federal Water Pollution Control Act, the licensee shall inform the NRC and analyze any associated changes in or to the Station, its components, its operation or in the discharge of effluents therefrom. If such change would entail any modification to this license, or any Technical Specifications which are part of this license, or require NRC approval pursuant to 10 CFR 50.59 or involve an environmental

impact different than analyzed in the Final Environmental Statement, the licensee shall file with the NRC, as applicable, an appropriate analysis of any such change on facility safety, and/or an analysis of any such change on the environmental impacts and on the overall cost-benefit balance for facility operation set forth in the Final Environmental Statement and a request for an amendment to the operating license, if required by the Commission's regulations. As used in this Condition (18)(b), Final Environmental Statement (FES) means the NRC Staff Final Environmental Statement related to Operation of Peach Bottom Atomic Power Station, Units Nos. 2 and 3, dated April 1973, as modified by (1) the Initial Decision of the Atomic Safety and Licensing Board dated September 14, 1973, (2) the Supplemental Initial Decision of the Atomic Safety and Licensing Board dated June 14, 1974, (3) the Decision of the Atomic Safety and Licensing Appeal Board dated July 5, 1974, (4) the Memorandum and Order of the Commission dated August 8, 1974, (5) any further modification resulting from further review by the Appeal Board and by the Commission, if any, and (6) any Environmental Impact Appraisal which has been or may be issued by the NRC since the FES was published in April 1973.

(19) Subsequent Renewed License Conditions

- (a) The information in the Updated Final Safety Analysis Report (UFSAR) supplement submitted pursuant to 10 CFR 54.21(d), as revised during the subsequent license renewal application review process, and commitments as listed in Appendix A of the "Safety Evaluation Report Related to the Subsequent License Renewal of Peach Bottom Atomic Power Station, Units 2 and 3," dated February 2020, are collectively the "Subsequent License Renewal UFSAR Supplement." This Supplement is henceforth part of the UFSAR, which will be updated in accordance with 10 CFR 50.71(e). As such, the licensee may make changes to the programs, activities, and commitments described in the Subsequent License Renewal UFSAR Supplement, provided the licensee evaluates such changes pursuant to the criteria set forth in 10 CFR 50.59, "Changes, Tests, and Experiments," and otherwise complies with the requirements in that section.
- (b) The Subsequent License Renewal UFSAR Supplement, as defined in subsequent renewed license condition (19)(a) above, describes programs to be implemented and activities to be completed prior to the subsequent period of extended operation, which is the period following the July 2, 2034, expiration of the initial renewed license.
 - 1. Constellation Energy Generation, LLC shall implement those new programs and enhancements to existing programs no later than 6 months before the subsequent period of extended operation.

2. Constellation Energy Generation, LLC shall complete those activities by the 6-month date prior to the subsequent period of extended operation or by the end of the last refueling outage before the subsequent period of extended operation, whichever occurs later.
3. Constellation Energy Generation, LLC shall notify the NRC in writing within 30 days after having accomplished item (b)1 above and include the status of those activities that have been or remain to be completed in item (b)2 above.

(20) PRA Model Updates to Support Implementation of the Risk Informed Completion Time (RICT) Program

Constellation Energy Generation, LLC is approved to implement TSTF-505, Revision 2, modifying the Technical Specification requirements related to Completion Times (CT) for Required Actions to provide the option to calculate a longer, risk-informed CT. The methodology for using the new Risk-Informed Completion Time (RICT) Program is described in NEI 06-09-A, "Risk-Informed Technical Specifications Initiative 4b, Risk-Managed Technical Specifications (RMTS) Guidelines," Revision 0, which was approved by the NRC on May 17, 2007.

Constellation Energy Generation, LLC will complete the implementation items listed in Attachment 6 of Exelon letter to the NRC dated May 29, 2020, prior to implementation of the RICT Program. All issues identified in the attachment will be addressed and any associated changes will be made, focused-scope peer reviews will be performed on changes that are PRA upgrades as defined in the PRA standard (ASME/ANS RA-Sa-2009, as endorsed by RG 1.200, Revision 2), and any findings will be resolved and reflected in the PRA of record prior to implementation of the RICT Program.

3. This subsequent renewed license is effective as of the date of issuance and shall expire at midnight on July 2, 2054.

FOR THE UNITED STATES NUCLEAR
REGULATORY COMMISSION

/RA/

Ho K. Nieh, Director
Office of Nuclear Reactor Regulation

Attachments:

Appendix A - Technical Specifications Peach Bottom Atomic Power Station Unit No. 3
Appendix B - Environmental Protection Plan

Date of Issuance: March 5, 2020

5.0 ADMINISTRATIVE CONTROLS

5.3 Unit Staff Qualifications

- 5.3.1 Each member of the unit staff shall meet or exceed the minimum qualifications referenced for comparable positions as specified in the Constellation Energy Generation, LLC Quality Assurance Topical Report.
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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

CONSTELLATION ENERGY GENERATION, LLC

AND

MIDAMERICAN ENERGY COMPANY

DOCKET NO. 50-254

QUAD CITIES NUCLEAR POWER STATION, UNIT 1

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 289
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 February 25, 2021, as supplemented by letters dated March 25, June 11, September 16, and September 29, 2021, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, Renewed Facility Operating License No. DPR-29 is hereby amended as indicated in the attachment to this license amendment.
3. This license amendment is effective as of the date of its issuance and shall be implemented within 15 days of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Bo M. Pham, Director
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Renewed Facility
Operating License

Date of Issuance: February 1, 2022



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

CONSTELLATION ENERGY GENERATION, LLC

AND

MIDAMERICAN ENERGY COMPANY

DOCKET NO. 50-265

QUAD CITIES NUCLEAR POWER STATION, UNIT 2

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 285
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 February 25, 2021, as supplemented by letters dated March 25, June 11, September 16, and September 29, 2021, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, Renewed Facility Operating License No. DPR-30 is hereby amended as indicated in the attachment to this license amendment.
3. This license amendment is effective as of the date of its issuance and shall be implemented within 15 days of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Bo M. Pham, Director
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Renewed Facility
Operating License

Date of Issuance: February 1, 2022

ATTACHMENT TO LICENSE AMENDMENT NOS. 289 AND 285

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; Appendix A, Technical Specifications; and Appendix B, Environmental Protection Plan, 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
Pages 1 through 7
Page 10

Appendix B to DPR-29
Cover page

License DPR-30
Pages 1 through 7
Page 10

Appendix B to DPR-30
Cover page

Appendix A
5.3-1

Insert

License DPR-29
Pages 1 through 7
Page 10

Appendix B to DPR-29
Cover page

License DPR-30
Pages 1 through 7
Page 10

Appendix B to DPR-30
Cover page

Appendix A
5.3-1



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

CONSTELLATION ENERGY GENERATION, LLC

AND

MIDAMERICAN ENERGY COMPANY

DOCKET NO. 50-254

QUAD CITIES NUCLEAR POWER STATION, UNIT 1

RENEWED FACILITY OPERATING LICENSE NO. DPR-29

The U.S. Nuclear Regulatory Commission (Commission) having previously made the findings set forth in License No. DPR-29 issued on December 14, 1972, has now found that:

- a. The application to renew License No. DPR-29 filed by the Exelon Generation Company, LLC*, acting for itself and MidAmerican Energy Company, 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, and all required notifications to other agencies or bodies have been duly made;
- b. Actions have been identified and have been or will be taken with respect to (1) managing the effects of aging during the period of extended operation on the functionality of structures and components that have been identified to require review under 10 CFR 54.21(a)(1), and (2) time-limited aging analyses that have been identified to require review under 10 CFR 54.21(c), such that there is reasonable assurance that the activities authorized by this renewed operating license will continue to be conducted in accordance with the current licensing basis, as defined in 10 CFR 54.3, for Quad Cities Nuclear Power Station, Unit 1 (facility or plant), and that any changes made to the plant's current licensing basis in order to comply with 10 CFR 54.29(a) are in accord with the Act and the Commission's regulations;
- c. Construction of the Quad Cities Nuclear Power Station Unit 1 (the facility) has been substantially completed in conformity with Provisional Construction Permit No. CPPR-23 and the application, as amended, the provisions of the Act, and the rules and regulations of the Commission set forth in 10 CFR Chapter I;
- d. The facility will operate in conformity with the application, as amended, the provisions of the Act, and the rules and regulations of the Commission;

* The Nuclear Regulatory Commission approved the transfer of the license from Commonwealth Edison Company to Exelon Generation Company, LLC on August 3, 2000. The Nuclear Regulatory Commission approved a transaction on November 16, 2021, that resulted in Exelon Generation Company, LLC being renamed Constellation Energy Generation, LLC.

- e. There is reasonable assurance: (i) that the activities authorized by this renewed operating license can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the rules and regulations of the Commission;
- f. Constellation Energy Generation, LLC and the MidAmerican Energy Company are technically and financially qualified to engage in the activities authorized by this renewed operating license in accordance with the rules and regulations of the Commission;
- g. Constellation Energy Generation, LLC (the licensee) and the MidAmerican Energy Company have satisfied the applicable provisions of 10 CFR Part 140, "Financial Protection Requirements and Indemnity Agreements";
- h. The issuance of this renewed operating license will not be inimical to the common defense and security or to the health and safety of the public;
- i. In accordance with the requirements of Appendix D of 10 CFR Part 50, Facility Operating License No. DPR-29 should be amended to authorized full-power operation subject to the conditions for protection of the environment referred to in paragraph 8 of the Summary and Conclusions section of the Final Environmental Statement dated September 1972 and set forth in the Technical Specifications incorporated herein; and
- j. After weighing the environmental, economic, technical, and other benefits of the facility against environmental and other costs and considering available alternatives, the issuance of this Renewed Facility Operating License No. DPR-29 is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

On the basis of the foregoing findings regarding this facility, Facility Operating License No. DPR-29, issued December 14, 1972, is superseded by Renewed Facility Operating License No. DPR-29, which is hereby issued to Constellation Energy Generation, LLC and MidAmerican Energy Company, to read as follows:

- 1. This renewed operating license applies to the Quad Cities Nuclear Power Station, Unit 1, a single cycle, boiling, light-water reactor and electric generating equipment (the facility). The facility is part of the Quad Cities Nuclear Power Station located in Rock Island County, Illinois, and is described in the application for construction permit and facility license dated May 31, 1966, and subsequent amendments thereto, including the application amendment dated August 30, 1968, as amended, for the full-power license and the Environmental Report dated November 12, 1970, as supplemented November 1, 1971, and thereafter.

2. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses Constellation Energy Generation, LLC and MidAmerican Energy, pursuant to Section 104b of the Act and 10 CFR Part 50, "Licensing of Production and Utilization Facilities," to own the facility, as their interests appear in the application, and hereby licenses Constellation Energy Generation, LLC (the licensee), acting for itself and as agent for MidAmerican Energy:
 - A. Pursuant to Section 104b of the Act and 10 CFR Part 50, "Licensing of Production and Utilization Facilities", to possess, use, and operate the facility as a utilization facility at the location designated in the application, in accordance with the procedures and limitations described in the application and in this license;
 - B. Pursuant to the Act and 10 CFR Part 70, to receive, possess and use at any time special nuclear materials, not including plutonium, as reactor fuel, in accordance with the limitations for storage and amounts required for operation as described in the Final Safety Analysis Report, as supplemented and amended;
 - C. Pursuant to the Act and 10 CFR Part 70, to receive, possess and use at any time up to 8 kilograms of plutonium for use in connection with operation of the facility;
 - D. 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 materials as sealed neutron sources for reactor startup, sealed sources for reactor instrumentation and radiation monitoring equipment calibration, and as fission detectors in amounts required;
 - E. 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 materials without restriction to chemical or physical form, for sample analysis or instrument and equipment calibration or associated with radioactive apparatus or components; and
 - F. Pursuant to the Act and 10 CFR Parts 30 and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of Quad Cities Nuclear Power Station, Unit Nos. 1 and 2.
3. This renewed operating license shall be deemed to contain and is subject to the conditions specified in the following Commission regulations set forth in 10 CFR Chapter I: Part 20, Section 30.34 of Part 30, Section 40.41 of Part 40, Sections 50.54 and 50.59 of Part 50, and Section 70.32 of Part 70; 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

Constellation Energy Generation, LLC is authorized to operate Quad Cities Unit No. 1 at power levels not in excess of 2957 megawatts (thermal).

B. Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 289, 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.

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

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

- 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 February 12, 1981; December 30, 1982; December 1, 1987 with supplement dated April 20, 1988; December 11, 1987 with supplement dated July 21, 1988; and February 25, 1991, subject to the following provision:

The licensee may make changes to the approved fire protection program without prior approval of the Commission only if those changes would not adversely affect the ability to achieve and maintain safe shutdown in the event of a fire.

- G. Deleted
- H. Deleted by incorporation into 3.E above, per Amendment No. 64 dated March 19, 1981.
- I. (Open)
- J. Deleted
- K. Deleted by Amendment No. 103 dated December 15, 1987.
- L. Deleted
- M. Deleted
- N. Deleted
- O. Constellation Energy Generation, LLC shall provide to the Director of the Office of Nuclear Reactor Regulation or the Director of the Office of Nuclear Material Safety and Safeguards, as applicable, a copy of any application, at the time it is filed, to transfer (excluding grants of security interests or liens) from Constellation Energy Generation, LLC to its direct or indirect parent, or to any other affiliated company, facilities for the production, transmission, or distribution of electric energy having a depreciated book value exceeding ten percent (10%) of Constellation Energy Generation, LLC's consolidated net utility plant, as recorded on Constellation Energy Generation, LLC's books of account.
- P. Deleted.
- Q. Deleted.

- R. Deleted.
- S. Constellation Energy Generation, LLC shall relocate certain Technical Specification requirements to licensee-controlled documents upon implementation of Amendment No. 199. The items and appropriate documents are as described in Table LA, "Removal of Details Matrix," and Table R, "Relocated Specifications," that are attached to the NRC's Safety Evaluation enclosed with Amendment No. 199.
- T. The schedule for performing Surveillance Requirements (SRs) that are new or revised in Amendment No. 199 shall be as follows:

For SRs that are new in this amendment, the first performance is due at the end of the first surveillance interval that begins on the date of implementation of Amendment No. 199.

For SRs that existed prior to this amendment whose intervals of performance are being reduced, the first reduced surveillance interval begins upon completion of the first surveillance performed after implementation of Amendment No. 199.

For SRs that existed prior to this amendment that have modified acceptance criteria, the first performance is due at the end of the first surveillance interval that began on the date the surveillance was last performed prior to the implementation of Amendment No. 199.

For SRs that existed prior to this amendment whose intervals of performance are being extended, the first extended surveillance interval begins upon completion of the last surveillance performed prior to implementation of Amendment No. 199.

- U. Deleted

- V. The license is amended to authorize changing the UFSAR to allow credit for containment overpressure as detailed below, to assure adequate Net Positive Suction Head is available for low pressure Emergency Core Cooling System pumps following a design-basis accident.

From (sec)	To (sec)	Credit (psig)
Accident start	290	8.0
290	5,000	4.8
5,000	44,500	6.7
44,500	52,500	6.0
52,500	60,500	5.5
60,500	75,000	4.7
75,000	95,000	3.8
95,000	115,000	3.0
115,000	155,000	2.3
155,000	Accident end	1.8

- W. Updated Final Safety Analysis Report

The Updated Final Safety Analysis Report supplement, submitted pursuant to 10 CFR 54.21(d), describes certain future activities to be completed prior to the period of extended operation. The licensee shall complete these activities no later than December 14, 2012, and shall notify the NRC in writing when implementation of these activities is complete and can be verified by NRC inspection.

The Updated Final Safety Analysis Report supplement, as revised, shall be included in the next scheduled update to the Updated Final Safety Analysis Report required by 10 CFR 50.71(e)(4) following issuance of this renewed license. Until that update is complete, Constellation Energy Generation, LLC may make changes to the programs and activities described in the supplement without prior Commission approval, provided that the licensee evaluates such change pursuant to the criteria set forth in 10 CFR 50.59 and otherwise complies with the requirements in that section.

- (4) Ensure that if any inserts are identified as potentially failing the minimum certified Boron-10 areal density criterion, based on correlation of the coupon evaluation or insert service wear evaluation results to inserts, or other abnormal indications, Constellation Energy Generation, LLC will take affected inserts out of service until it can be positively demonstrated that the minimum certified Boron-10 areal density criterion (0.0116 g/cm²) is met for each insert; and,
 - (5) Submit a report to the NRC, within 90 days following completion of evaluations associated with Item 4 above, that describes the testing results, assessments performed, and interim and long-term corrective actions for abnormal indications.
4. This renewed operating license is effective as of the date of issuance and shall expire at midnight on December 14, 2032

FOR THE NUCLEAR REGULATORY COMMISSION

Original Signed By:

J. E. Dyer, Director
Office of Nuclear Reactor Regulation

Attachments:

1. Appendix A – Technical Specifications
2. Appendix B – Environmental Protection Plan

Date of Issuance: October 28, 2004

APPENDIX B

TO FACILITY OPERATING LICENSE NO. DPR-29
QUAD-CITIES STATION
UNIT 1

CONSTELLATION ENERGY GENERATION, LLC

DOCKET NO. 50-254

ENVIRONMENTAL PROTECTION PLAN
(NON-RADIOLOGICAL)



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

CONSTELLATION ENERGY GENERATION, LLC

AND

MIDAMERICAN ENERGY COMPANY

DOCKET NO. 50-265

QUAD CITIES NUCLEAR POWER STATION, UNIT 2

RENEWED FACILITY OPERATING LICENSE NO. DPR-30

The U.S. Nuclear Regulatory Commission (Commission) having previously made the findings set forth in License No. DPR-30 issued on December 14, 1972, has now found that:

- a. The application to renew License No. DPR-30 filed by the Exelon Generation Company, LLC*, acting for itself and MidAmerican Energy Company, 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, and all required notifications to other agencies or bodies have been duly made;
- b. Actions have been identified and have been or will be taken with respect to (1) managing the effects of aging during the period of extended operation on the functionality of structures and components that have been identified to require review under 10 CFR 54.21(a)(1), and (2) time-limited aging analyses that have been identified to require review under 10 CFR 54.21(c), such that there is reasonable assurance that the activities authorized by this renewed operating license will continue to be conducted in accordance with the current licensing basis, as defined in 10 CFR 54.3, for Quad Cities Nuclear Power Station, Unit 2 (facility or plant), and that any changes made to the plant's current licensing basis in order to comply with 10 CFR 54.29(a) are in accord with the Act and the Commission's regulations;
- c. Construction of the Quad Cities Nuclear Power Station Unit 2 (the facility) has been substantially completed in conformity with Provisional Construction Permit No. CPPR-24 and the application, as amended, the provisions of the Act, and the rules and regulations of the Commission set forth in 10 CFR Chapter I;
- d. The facility will operate in conformity with the application, as amended, the provisions of the Act, and the rules and regulations of the Commission;

* The Nuclear Regulatory Commission approved the transfer of the license from Commonwealth Edison Company to Exelon Generation Company, LLC on August 3, 2000. The Nuclear Regulatory Commission approved a transaction on November 16, 2021, that resulted in Exelon Generation Company, LLC being renamed Constellation Energy Generation, LLC.

- e. There is reasonable assurance: (i) that the activities authorized by this renewed operating license can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the rules and regulations of the Commission;
- f. Constellation Energy Generation, LLC and the MidAmerican Energy Company are technically and financially qualified to engage in the activities authorized by this renewed operating license in accordance with the rules and regulations of the Commission;
- g. Constellation Energy Generation, LLC (the licensee) and the MidAmerican Energy Company have satisfied the applicable provisions of 10 CFR Part 140, "Financial Protection Requirements and Indemnity Agreements";
- h. The issuance of this renewed operating license will not be inimical to the common defense and security or to the health and safety of the public;
- i. In accordance with the requirements of Appendix D of 10 CFR Part 50, Facility Operating License No. DPR-30 should be amended to authorized full-power operation subject to the conditions for protection of the environment referred to in paragraph 8 of the Summary and Conclusions section of the Final Environmental Statement dated September 1972 and set forth in the Technical Specifications incorporated herein; and
- j. After weighing the environmental, economic, technical, and other benefits of the facility against environmental and other costs and considering available alternatives, the issuance of this Renewed Facility Operating License No. DPR-30 is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

On the basis of the foregoing findings regarding this facility, Facility Operating License No. DPR-30, issued December 14, 1972, is superseded by Renewed Facility Operating License No. DPR-30, which is hereby issued to Constellation Energy Generation, LLC and MidAmerican Energy Company, to read as follows:

1. This renewed operating license applies to the Quad Cities Nuclear Power Station, Unit 2, a single cycle, boiling, light-water reactor and electric generating equipment (the facility) which is jointly owned by Constellation Energy Generation, LLC and MidAmerican Energy. The facility is part of the Quad Cities Nuclear Power Station located in Rock Island County, Illinois, and is described in the application for construction permit and facility license dated May 31, 1966, and subsequent amendments thereto, including the application amendment dated August 30, 1968, as amended, for the full-power license and the Environmental Report dated November 12, 1970, as supplemented November 1, 1971, and thereafter.

2. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses Constellation Energy Generation, LLC and MidAmerican Energy, pursuant to Section 104b of the Act and 10 CFR Part 50, "Licensing of Production and Utilization Facilities," to own the facility, as their interests appear in the application, and hereby licenses Constellation Energy Generation, LLC (the licensee), acting for itself and as agent for MidAmerican Energy:
 - A. Pursuant to Section 104b of the Act and 10 CFR Part 50, "Licensing of Production and Utilization Facilities," to possess, use, and operate the facility as a utilization facility at the location designated in the application, in accordance with the procedures and limitations set forth in this renewed operating license;
 - B. Pursuant to the Act and 10 CFR Part 70 to receive, possess and use at any time special nuclear materials, not including plutonium, as reactor fuel, in accordance with the limitations for storage and amounts required for operation as described in the Final Safety Analysis Report, as supplemented and amended;
 - C. 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 materials as sealed neutron sources for reactor startup, sealed sources for reactor instrumentation and radiation monitoring equipment calibration, and as fission detectors in amounts required;
 - D. 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 materials without restriction to chemical or physical form, for sample analysis or instrument and equipment calibration or associated with radioactive apparatus or components; and
 - E. Pursuant to the Act and 10 CFR Parts 30 and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of Quad Cities Nuclear Power Station, Unit Nos. 1 and 2.

3. This renewed operating license shall be deemed to contain and is subject to the conditions specified in the following Commission regulations set forth in 10 CFR Chapter I: Part 20, Section 30.34 of Part 30, Section 40.41 of Part 40, Sections 50.54 and 50.59 of Part 50, and Section 70.32 of Part 70; 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

Constellation Energy Generation, LLC is authorized to operate Quad Cities Unit No. 2 at power levels not in excess of 2957 megawatts (thermal).

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 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.

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

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

- 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 February 12, 1981; December 30, 1982; December 1, 1987 with supplement dated April 20, 1988; December 11, 1987 with supplement dated July 21, 1988; and February 25, 1991, subject to the following provision:

The licensee may make changes to the approved fire protection program without prior approval of the Commission only if those changes would not adversely affect the ability to achieve and maintain safe shutdown in the event of a fire.

- G. Deleted by incorporation into 3.E above, per Amendment No. 58 dated March 19, 1981.
- H. Deleted
- I. Deleted
- J. Deleted
- K. Deleted
- L. Deleted
- M. Deleted
- N. Constellation Energy Generation, LLC shall provide to the Director of the Office of Nuclear Reactor Regulation or the Director of the Office of Nuclear Material Safety and Safeguards, as applicable, a copy of any application, at the time it is filed, to transfer (excluding grants of security interests or liens) from Constellation Energy Generation, LLC to its direct or indirect parent, or to any other affiliated company, facilities for the production, transmission, or distribution of electric energy having a depreciated book value exceeding ten percent (10%) of Constellation Energy Generation, LLC's consolidated net utility plant, as recorded on Constellation Energy Generation, LLC's books of account.
- O. Deleted.
- P. Deleted.

- Q. Deleted.
- R. Constellation Energy Generation, LLC shall relocate certain Technical Specification requirements to licensee-controlled documents upon implementation of Amendment No. 195. The items and appropriate documents are as described in Table LA, "Removal of Details Matrix," and Table R, "Relocated Specifications," that are attached to the NRC's Safety Evaluation enclosed with Amendment No. 195.
- S. The schedule for performing Surveillance Requirements (SRs) that are new or revised in Amendment No. 195 shall be as follows:

For SRs that are new in this amendment, the first performance is due at the end of the first surveillance interval that begins on the date of implementation of Amendment No. 195.

For SRs that existed prior to this amendment whose intervals of performance are being reduced, the first reduced surveillance interval begins upon completion of the first surveillance performed after implementation of Amendment No. 195.

For SRs that existed prior to this amendment that have modified acceptance criteria, the first performance is due at the end of the first surveillance interval that began on the date the surveillance was last performed prior to the implementation of Amendment No. 195.

For SRs that existed prior to this amendment whose intervals of performance are being extended, the first extended surveillance interval begins upon completion of the last surveillance performed prior to implementation of Amendment No. 195.

- T. Deleted

- U. The license is amended to authorize changing the UFSAR to allow credit for containment overpressure as detailed below, to assure adequate Net Positive Suction Head is available for low pressure Emergency Core Cooling System pumps following a design-basis accident.

From (sec)	To (sec)	Credit (psig)
Accident start	290	8.0
290	5,000	4.8
5,000	44,500	6.7
44,500	52,500	6.0
52,500	60,500	5.5
60,500	75,000	4.7
75,000	95,000	3.8
95,000	115,000	3.0
115,000	155,000	2.3
155,000	Accident end	1.8

V. Updated Final Safety Analysis Report

The Updated Final Safety Analysis Report supplement, submitted pursuant to 10 CFR 54.21(d), describes certain future activities to be completed prior to the period of extended operation. The licensee shall complete these activities no later than December 14, 2012, and shall notify the NRC in writing when implementation of these activities is complete and can be verified by NRC inspection.

The Updated Final Safety Analysis Report supplement, as revised, shall be included in the next scheduled update to the Updated Final Safety Analysis Report required by 10 CFR 50.71(e)(4) following issuance of this renewed license. Until that update is complete, Constellation Energy Generation, LLC may make changes to the programs and activities described in the supplement without prior Commission approval, provided that the licensee evaluates such change pursuant to the criteria set forth in 10 CFR 50.59 and otherwise complies with the requirements in that section.

- (4) Ensure that if any inserts are identified as potentially failing the minimum certified Boron-10 areal density criterion, based on correlation of the coupon evaluation or insert service wear evaluation results to inserts, or other abnormal indications, Constellation Energy Generation, LLC will take affected inserts out of service until it can be positively demonstrated that the minimum certified Boron-10 areal density criterion (0.0116 g/cm²) is met for each insert; and,
 - (5) Submit a report to the NRC, within 90 days following completion of evaluations associated with Item 4 above, that describes the testing results, assessments performed, and interim and long-term corrective actions for abnormal indications.
4. This renewed operating license is effective as of the date of issuance and shall expire at midnight on December 14, 2032.

FOR THE NUCLEAR REGULATORY COMMISSION

Original Signed By:

J. E. Dyer, Director
Office of Nuclear Reactor Regulation

Attachments:

1. Appendix A – Technical Specifications
2. Appendix B – Environmental Protection Plan

Date of Issuance: October 28, 2004

APPENDIX B

TO FACILITY OPERATING LICENSE NO. DPR-30
QUAD-CITIES STATION
UNIT 2

CONSTELLATION ENERGY GENERATION, LLC

DOCKET NO. 50-265

ENVIRONMENTAL PROTECTION PLAN
(NON-RADIOLOGICAL)

5.0 ADMINISTRATIVE CONTROLS

5.3 Unit Staff Qualifications

5.3.1 Each member of the unit staff shall meet or exceed the minimum qualifications referenced for comparable positions as specified in the Constellation Energy Generation, LLC Quality Assurance Topical Report.



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

R. E. GINNA NUCLEAR POWER PLANT, LLC

CONSTELLATION ENERGY GENERATION, LLC

DOCKET NO. 50-244

R. E. GINNA NUCLEAR POWER PLANT

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 147
Renewed License No. DPR-18

1. The U.S. Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Exelon Generation Company, LLC dated February 25, 2021, as supplemented by letters dated March 25, June 11, September 16, and September 29, 2021, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, Renewed Facility Operating License No. DPR-18 is hereby amended as indicated in the attachment to this license amendment.
3. This license amendment is effective as of the date of its issuance and shall be implemented within 15 days of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Bo M. Pham, Director
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Renewed Facility
Operating License

Date of Issuance: February 1, 2022

ATTACHMENT TO LICENSE AMENDMENT NO. 147
RENEWED FACILITY OPERATING LICENSE NO. DPR-18
R. E. GINNA NUCLEAR POWER PLANT
DOCKET NO. 50-244

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

Remove

License DPR-18
Pages 1 through 9

Appendix A
5.3-1

Insert

License DPR-18
Pages 1 through 9

Appendix A
5.3-1



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

R. E. GINNA NUCLEAR POWER PLANT, LLC

CONSTELLATION ENERGY GENERATION, LLC

DOCKET NO. 50-244

R. E. GINNA NUCLEAR POWER PLANT

RENEWED FACILITY OPERATING LICENSE NO. DPR-18

1. The U.S. Nuclear Regulatory Commission (the Commission) having previously made the findings set forth in License No. DPR-18 issued December 10, 1984, has now found that:
 - A. The application to renew License No. DPR-18 filed by Rochester Gas and Electric Corporation (RG&E)* complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the rules and regulations of the Commission set forth in Title 10 of the Code of Federal Regulations (10 CFR) Chapter I and all required notifications to other agencies or bodies have been duly made;
 - B. Actions have been identified and have been or will be taken with respect to (1) managing the effects of aging during the period of extended operation on the functionality of structures and components that have been identified to require review under 10 CFR 54.21(a)(1), and (2) time-limited aging analyses that have been identified to require review under 10 CFR 54.21(c), such that there is reasonable assurance that the activities authorized by this renewed license will continue to be conducted in accordance with the current licensing basis, as defined in 10 CFR 54.3, for R. E. Ginna Nuclear Power Plant (the facility), and that any changes made to the plant's current licensing basis in order to comply with 10 CFR 54.29(a) are in accord with the Act and the Commission's regulations;
 - C. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;

* By Order dated October 9, 2009, as superseded by Order dated October 30, 2009, the transfer of this license to R. E. Ginna Nuclear Power Plant, LLC, was approved. By Order dated March 25, 2014, the transfer of the operating authority under this license to Exelon Generation Company, LLC was approved. The U.S. Nuclear Regulatory Commission approved a transaction on November 16, 2021, that resulted in Exelon Generation Company, LLC being renamed Constellation Energy Generation, LLC.

- D. There is reasonable assurance (i) that the facility can be operated at power levels up to 1520 megawatts (thermal) without endangering the health and safety of the public; and (ii) that such activities will be conducted in compliance with the regulations of the Commission (except as exempted from compliance in Section 2.D below);
 - E. R. E. Ginna Nuclear Power Plant, LLC (Ginna LLC) and Constellation Energy Generation, LLC are technically and financially qualified to engage in the activities authorized by this renewed operating license in accordance with the rules and regulations of the Commission;
 - F. Constellation Energy Generation, LLC and Ginna LLC** have furnished proof of financial protection that satisfies the requirements of 10 CFR Part 140;
 - G. The issuance of this renewed license will not be inimical to the common defense and security or to the health and safety of the public; and
 - H. After weighing the environmental, economic, technical, and other benefits of the facility against environmental costs and considering available alternatives, the Commission concludes that the issuance of Renewed Operating License No. DPR-18 is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.
2. On the basis of the foregoing findings regarding this facility, Facility Operating License No. DPR-18, is superseded by Renewed Facility Operating License No. DPR-18, hereby issued to Ginna LLC and Constellation Energy Generation, LLC to read as follows:
- A. This renewed license applies to the R. E. Ginna Nuclear Power Plant, a closed cycle, pressurized, light-water-moderated and cooled reactor, and electric generating equipment which is owned by Ginna LLC (owner licensee). The facility is located on the owner licensee's site on the south shore of Lake Ontario, Wayne County, New York, about 16 miles east of the City of Rochester and is described in the licensee's Updated Final Safety Analysis Report (UFSAR), as supplemented and amended.
 - B. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses:
 - (1) Pursuant to Section 104b of the Act and 10 CFR Part 50, "Domestic Licensing of Production and Utilization Facilities," (a) Ginna LLC to possess and (b) Constellation Energy Generation, LLC to possess, use and operate the facility at the designated location in Wayne County, New York, in accordance with the procedures and limitations set forth in this renewed license;

** Constellation Energy Generation, LLC is authorized to act for R. E. Ginna Nuclear Power Plant, LLC and has exclusive responsibility and control over the physical possession, operation, and maintenance of the facility.

- (2) Constellation Energy Generation, LLC, pursuant to the Act and 10 CFR Part 70, to receive, possess, and use at any time special nuclear material or reactor fuel, in accordance with the limitations for storage and amounts required for reactor operation as described in the Final Safety Analysis Report, as amended, and Commission Safety Evaluations dated November 15, 1976, October 5, 1984, November 14, 1984, and August 30, 1995.
 - (a) Constellation Energy Generation, LLC, pursuant to the Act and 10 CFR Part 70, to receive and store four (4) mixed oxide fuel assemblies in accordance with the RG&E's application dated December 14, 1979 (transmitted by letter dated December 20, 1979);
 - (b) Constellation Energy Generation, LLC, pursuant to the Act and 10 CFR Part 70, to possess and use four (4) mixed oxide fuel assemblies in accordance with the RG&E's application dated December 14, 1979 (transmitted by letter dated December 20, 1979), as supplemented February 20, 1980, and March 5, 1980;
 - (3) Constellation Energy Generation, 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) Constellation Energy Generation, 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) Constellation Energy Generation, LLC, pursuant to the Act and 10 CFR Parts 30 and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of the facility.
- C. This license shall be deemed to contain and is subject to the conditions specified in the following Commission regulations in 10 CFR Part 20, Section 30.34 of Part 30, Section 40.41 of Part 40, Sections 50.54 and 50.59 of Part 50, and Section 70.32 of Part 70; and is subject to all applicable provisions of the Act and rules, regulations and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified below:
- (1) Maximum Power Level

Constellation Energy Generation, LLC is authorized to operate the facility at steady-state power levels up to a maximum of 1775 megawatts (thermal).

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 147, are hereby incorporated in the renewed license. Constellation Energy Generation, LLC shall operate the facility in accordance with the Technical Specifications.

(3) Fire Protection

Constellation Energy Generation, LLC shall implement and maintain in effect all provisions of the approved fire protection program that comply with 10 CFR 50.48(a) and 10 CFR 50.48(c), as specified in the licensee's amendment request dated March 28, 2013, supplemented by letters dated December 17, 2013; January 29, 2014; February 28, 2014; September 5, 2014; September 24, 2014; December 4, 2014; March 18, 2015; June 11, 2015; August 7, 2015; and as approved in the safety evaluation report dated November 23, 2015. Except where NRC approval for changes or deviations is required by 10 CFR 50.48(c), and provided no other regulation, technical specification, license condition or requirement would require prior NRC approval, the licensee may make changes to the fire protection program without prior approval of the Commission if those changes satisfy the provisions set forth in 10 CFR 50.48(a) and 10 CFR 50.48(c), the change does not require a change to a technical specification or a license condition, and the criteria listed below are satisfied.

(a) Risk-Informed Changes that May Be Made Without Prior NRC Approval

A risk assessment of the change must demonstrate that the acceptance criteria below are met. The risk assessment approach, methods, and data shall be acceptable to the NRC and shall be appropriate for the nature and scope of the change being evaluated; be based on the as-built, as-operated, and maintained plant; and reflect the operating experience at the plant. Acceptable methods to assess the risk of the change may include methods that have been used in the peer-reviewed fire PRA model, methods that have been approved by NRC through a plant-specific license amendment or NRC approval of generic methods specifically for use in NFPA 805 risk assessments, or methods that have been demonstrated to bound the risk impact.

1. Prior NRC review and approval is not required for changes that clearly result in a decrease in risk. The proposed change must also be consistent with the defense in-depth philosophy and must maintain sufficient safety margins. The change may be implemented following completion of the plant change evaluation.

2. Prior NRC review and approval is not required for individual changes that result in a risk increase less than 1×10^{-7} /year (yr) for CDF and less than 1×10^{-8} /yr for LERF. The proposed change must also be consistent with the defense-in-depth philosophy and must maintain sufficient safety margins. The change may be implemented following completion of the plant change evaluation.

(b) Other Changes that May Be Made Without Prior NRC Approval

1. Changes to NFPA 805, Chapter 3, Fundamental Fire Protection Program

Prior NRC review and approval are not required for changes to the NFPA 805, Chapter 3, fundamental fire protection program elements and design requirements for which an engineering evaluation demonstrates that the alternative to the Chapter 3 element is functionally equivalent or adequate for the hazard. The licensee may use an engineering evaluation to demonstrate that a change to NFPA 805, Chapter 3, element is functionally equivalent to the corresponding technical requirement. A qualified fire protection engineer shall perform the engineering evaluation and conclude that the change has not affected the functionality of the component, system, procedure, or physical arrangement, using a relevant technical requirement or standard.

The licensee may use an engineering evaluation to demonstrate that changes to certain NFPA 805, Chapter 3, elements are acceptable because the alternative is "adequate for the hazard." Prior NRC review and approval would not be required for alternatives to four specific sections of NFPA 805, Chapter 3, for which an engineering evaluation demonstrates that the alternative to the Chapter 3 element is adequate for the hazard. A qualified fire protection engineer shall perform the engineering evaluation and conclude that the change has not affected the functionality of the component, system, procedure, or physical arrangement, using a relevant technical requirement or standard. The four specific sections of NFPA 805, Chapter 3, are as follows:

- Fire Alarm and Detection Systems (Section 3.8);
- Automatic and Manual Water-Based Fire Suppression Systems (Section 3.9);
- Gaseous Fire Suppression Systems (Section 3.10); and
- Passive Fire Protection Features (Section 3.11).

This License Condition does not apply to any demonstration of equivalency under Section 1.7 of NFPA 805.

2. Fire Protection Program Changes that Have No More than Minimal Risk Impact

Prior NRC review and approval are not required for changes to the licensee's fire protection program that have been demonstrated to have no more than a minimal risk impact. The licensee may use its screening process as approved in the NRC safety evaluation dated November 23, 2015, to determine that certain fire protection program changes meet the minimal criterion. The licensee shall ensure that fire protection defense-in-depth and safety margins are maintained when changes are made to the fire protection program.

(c) Transition License Conditions

1. Before achieving full compliance with 10 CFR 50.48(c), as specified by (c)2 and (c)3 below, risk-informed changes to the licensee's fire protection program may not be made without prior NRC review and approval unless the change has been demonstrated to have no more than a minimal risk impact, as described in (b)2 above.
2. The licensee shall implement the modifications to its facility, as described in LAR Attachment S, Table S-2, "Plant Modifications Committed," of Exelon Generation letter dated June 11, 2015, as modified by the Exelon Generation letter dated June 30, 2017, to complete the transition to full compliance with 10 CFR 50.48(c) no later than prior to startup from the second refueling outage greater than 12 months after receipt of the safety evaluation dated November 23, 2015. The licensee shall maintain appropriate compensatory measures in place until completion of these modifications.
3. The licensee shall complete the implementation items listed in LAR Attachment S, Table S-3, "Implementation Items," of Exelon Generation letter dated June 11, 2015, as modified by Exelon Generation letter dated June 30, 2017, except Implementation Items 9, 10, 11, 12, 13, 14, 15, 19, 21, 23, and 24, by 180 days after NRC approval unless that date falls within a scheduled refueling outage, then implementation will occur 60 days after startup from that scheduled refueling outage. Implementation Items 9, 10, 11, 12, 13, 14, 15, 19, 21, 23, and 24 are associated with modifications described in Table S-2 and will be completed once the related modifications are installed and validated in the PRA model.

(4) Deleted

(5) Deleted

(6) Deleted

(7) Deleted

(8) Mitigation Strategy

Constellation Energy Generation, LLC shall develop and maintain strategies for addressing large fires and explosions and that include the following key areas:

(a) Fire fighting response strategy with the following elements:

1. Pre-defined coordinated fire response strategy and guidance
2. Assessment of mutual aid fire fighting assets
3. Designated staging areas for equipment and materials
4. Command and control
5. Training of response personnel

(b) Operations to mitigate fuel damage considering the following:

1. Protection and use of personnel assets
2. Communications
3. Minimizing fire spread
4. Procedures for implementing integrated fire response strategy
5. Identification of readily-available pre-staged equipment
6. Training on integrated fire response strategy
7. Spent fuel pool mitigation measures

(c) Actions to minimize release to include consideration of:

1. Water spray scrubbing
2. Dose to onsite responders

(9) Control Room Envelope Habitability

Upon implementation of Amendment No. 105 adopting TSTF-448, Revision 3, the determination of control room envelope (CRE) unfiltered air leakage as required by SR 3.7.9.4, in accordance with TS 5.5.16.c.i and the assessment of CRE habitability as required by 5.5.16.c.ii, shall be considered met. Following implementation:

(a) The first performance of SR 3.7.9.4 in accordance with Specification 5.5.16.c.i shall be within the specified Frequency of 6 years, plus the 18-month allowance of SR 3.0.2, as measured from February 8, 2005, the date of the most recent successful tracer gas test, as-stated in the April 6, 2007 letter response to Generic Letter 2003-01, or within the next 18 months if the time period since the most recent tracer gas test is greater than 6 years.

(b) The first performance of the periodic assessment of CRE habitability, Specification 5.5.16.c.ii, shall be within 3 years, plus the 9-month allowance of SR 3.0.2 as measured from February 8, 2005, the date of the most recent successful tracer gas test, as stated in-the April 6, 2007 letter response to Generic Letter 2003-01, or within the next 9 months if the time period since the most recent successful tracer gas test is greater than 3 years.

(10) Deleted

(11) Constellation Energy Generation, LLC shall, no later than the date the closing of the transaction approved on November 16, 2021, occurs, enter into a Support Agreement of approximately \$118 million with the owner licensee. R. E. Ginna Nuclear Power Plant, LLC shall not take any action to cause Constellation Energy Generation, LLC, or its successors and assigns, to void, cancel, or materially modify the Constellation Energy Generation, LLC Support Agreement or cause it to fail to perform, or impair its performance under the Constellation Energy Generation, LLC Support Agreement, without the prior written consent of the NRC. The Constellation Energy Generation, LLC Support Agreement may not be amended or modified without 30 days prior written notice to the Director of the Office of Nuclear Reactor Regulation or their designee. An executed copy of the Constellation Energy Generation, LLC Support Agreement shall be submitted to the NRC no later than 30 days after the completion of the proposed transaction. Constellation Energy Generation, LLC shall inform the NRC in writing no later than 14 days after any funds are provided to or for the owner licensee under the Constellation Energy Generation, LLC Support Agreement.

(12) Deleted

(13) Within 14 days of the closing of the transaction approved on November 16, 2021, Constellation Energy Generation, LLC shall submit to the NRC the Nuclear Operating Services Agreement reflecting the terms set forth in the application dated February 25, 2021. Section 7.1 of the Nuclear Operating Services Agreement may not be modified in any material respect related to financial arrangements that would adversely impact the ability of the licensee to fund safety-related activities authorized by the license without the prior written consent of the Director of the Office of Nuclear Reactor Regulation.

(14) Deleted

(15) Deleted

(16) Deleted

(17) Deleted

(18) Deleted

(19) Constellation Energy Generation, LLC shall provide to the Director of the Office of Nuclear Reactor Regulation or the Director of the Office of Nuclear Material Safety and Safeguards, as applicable, a copy of any application, at the time it is filed, to transfer (excluding grants of security interests or liens) from Constellation Energy Generation, LLC to its direct or indirect parent, or to any other affiliated company, facilities for the production, transmission, or distribution of electric energy having a depreciated book value exceeding ten percent (10%) of Constellation Energy Generation, LLC's consolidated net utility plant, as recorded on Constellation Energy Generation, LLC's books of account.

D. The facility requires an exemption from certain requirements of 10 CFR 50.46(a)(1). This includes an exemption from 50.46(a)(1), that emergency core cooling system (ECCS) performance be calculated in accordance with an acceptable calculational model which conforms to the provisions in Appendix K (SER dated April 18, 1978). The exemption will expire upon receipt and approval of revised ECCS calculations. The aforementioned exemption is authorized by law and will not endanger life property or the common defense and security and is otherwise in the public interest. Therefore, the exemption is hereby granted pursuant to 10 CFR 50.12.

E. Constellation Energy Generation, LLC shall fully implement and maintain in effect all provisions of the Commission-approved physical security, training and qualification, and safeguards contingency plans including amendments made pursuant to provisions of the Miscellaneous Amendments and Search Requirements revisions to 10 CFR 73.55 (51 FR 27827 and 27822) and to the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The combined set of plans, which contains Safeguards Information protected under 10 CFR 73.21, is entitled: "R. E. Ginna Nuclear Power Plant Security Plan, Training and Qualification Plan, and Safeguards Contingency Plan," submitted by letter dated May 15, 2006.

Constellation Energy Generation, LLC shall fully implement and maintain in effect all provisions of the Commission-approved cyber security plan (CSP), including changes made pursuant to the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The licensee's CSP was approved by License Amendment No. 113 and modified by License Amendment No. 117. The licensee has obtained Commission authorization to use Section 161A preemption authority under 42 U.S.C. 2201a for weapons at its facility.

5.0 ADMINISTRATIVE CONTROLS

5.3 Plant Staff Qualifications

5.3.1 Each member of the plant staff shall meet or exceed the minimum qualifications referenced for comparable positions as specified in the Constellation Energy Generation, LLC Quality Assurance Topical Report.



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

PSEG NUCLEAR LLC

CONSTELLATION ENERGY GENERATION, LLC

DOCKET NO. 50-272

SALEM NUCLEAR GENERATING STATION, UNIT NO. 1

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 341
Renewed License No. DPR-70

1. The U.S. Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Exelon Generation Company, LLC dated February 25, 2021, as supplemented by letters dated March 25, June 11, September 16, and September 29, 2021, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, Renewed Facility Operating License No. DPR-70 is hereby amended as indicated in the attachment to this license amendment.
3. This license amendment is effective as of the date of its issuance and shall be implemented within 15 days of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Bo M. Pham, Director
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Renewed Facility
Operating License

Date of Issuance: February 1, 2022

ATTACHMENT TO LICENSE AMENDMENT NO. 341
RENEWED FACILITY OPERATING LICENSE NO. DPR-70
SALEM NUCLEAR GENERATING STATION, UNIT NO. 1
DOCKET NO. 50-272

Replace the following pages of the Renewed Facility Operating License and Appendix C, Additional Conditions, 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-70

Page 1

Page 2

Page 3

Page 5

Appendix C

Page 1

Insert

License DPR-70

Page 1

Page 2

Page 3

Page 5

Appendix C

Page 1



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

PSEG NUCLEAR LLC

CONSTELLATION ENERGY GENERATION, LLC

DOCKET NO. 50-272

SALEM NUCLEAR GENERATING STATION, UNIT NO. 1

FACILITY OPERATING LICENSE

Renewed License No. DPR-70

1. The Nuclear Regulatory Commission (the Commission) having found that:
 - A. The application for a renewed license, filed by PSEG Nuclear LLC acting on its own behalf and as agent for Exelon Generation Company, LLC* complies with the standards and requirements of the Atomic Energy Act (the Act) of 1954, as amended, and the Commission's rules and regulations set forth in 10 CFR Chapter I and all required notifications to other agencies or bodies have been duly made;
 - B. Construction of the Salem Nuclear Generating Station, Unit No. 1 (facility) has been substantially completed in conformity with Provisional Construction Permit No. CPPR-52 and the application, as amended, the provisions of the Act and regulations of the Commission;
 - C. The facility will operate in conformity with the application, as amended, the provisions of the Act, and the rules and regulations of the Commission;
 - D. There is reasonable assurance: (i) that the activities authorized by this renewed operating license can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the rules and regulations of the Commission;
 - E. PSEG Nuclear LLC is technically qualified and the licensees are financially qualified to engage in the activities authorized by this renewed operating license in accordance with the rules and regulations of the Commission;
 - F. The licensees have satisfied the applicable provisions of 10 CFR Part 140, "Financial Protection Requirements and Indemnity Agreements," of the Commission's regulations;
 - G. The issuance of this renewed operating license will not be inimical to the common defense and security or to the health and safety of the public;

* The Commission approved a transaction on November 16, 2021, that resulted in Exelon Generation Company, LLC being renamed Constellation Energy Generation, LLC. References to "the licensees" are to PSEG Nuclear LLC and Constellation Energy Generation, LLC.

- H. After weighing the environmental, economic, technical, and other benefits of the facility against environmental and other costs and considering available alternatives, the issuance of Renewed Facility Operating License No. DPR-70, subject to the conditions for protection of the environment set forth in the Technical Specifications, Appendix B is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied;
 - I. The receipt, possession, and use of source, byproduct and special nuclear material as authorized by this renewed license will be in accordance with the Commission's regulations in 10 CFR Parts 30, 40, and 70 including 10 CFR Sections 30.33, 40.32, and 70.23 and 70.31; and
 - J. Actions have been identified and have been or will be taken with respect to (1) managing the effects of aging during the period of extended operation on the functionality of structures and components that have been identified to require review under 10 CFR 54.21(a)(1), and (2) time-limited aging analyses that have been identified to require review under 10 CFR 54.21(c), such that there is reasonable assurance that the activities authorized by this renewed operating license will continue to be conducted in accordance with the current licensing basis, as defined in 10 CFR 54.3, for the facility, and that any changes made to the facility's current licensing basis in order to comply with 10 CFR 54.29(a) are in accordance with the Act and the Commission's regulations.
2. Renewed Facility Operating License No. DPR-70 is hereby issued to PSEG Nuclear LLC and Constellation Energy Generation, LLC (the licensees) to read as follows:
- A. This renewed license applies to the Salem Nuclear Generating Station, Unit No. 1, a pressurized water nuclear reactor and associated equipment (the facility), owned by PSEG Nuclear LLC and Constellation Energy Generation, LLC and operated by PSEG Nuclear LLC. The facility is located on the applicants' site in Salem County, New Jersey, on the southern end of Artificial Island on the east bank of the Delaware River in Lower Alloways Creek Township, and is described in the "Final Safety Analysis Report" as supplemented and amended and the Environmental Report as supplemented and amended.
 - B. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses:
 - (1) PSEG Nuclear LLC and Constellation Energy Generation, LLC to possess the facility at the designated location in Salem County, New Jersey, in accordance with the procedures and limitations set forth in this renewed license;
 - (2) PSEG Nuclear LLC, pursuant to Section 104b of the Act and 10 CFR Part 50, "Licensing of Production and Utilization Facilities," to possess, use and operate the facility;
 - (3) PSEG Nuclear LLC, 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;

- (4) PSEG Nuclear 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;
- (5) PSEG Nuclear 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
- (6) PSEG Nuclear LLC, pursuant to the Act and 10 CFR Parts 30 and 70, to possess but not separate, such byproduct and special nuclear materials as may be produced by the operation of the facility.

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

(1) Maximum Power Level

PSEG Nuclear LLC is authorized to operate the facility at a steady state reactor core power level not in excess of 3459 megawatts (one hundred percent of rated core power).

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 340, and the Environmental Protection Plan contained in Appendix B, are hereby incorporated in the renewed license. PSEG Nuclear LLC shall operate the facility in accordance with the Technical Specifications, and the Environmental Protection Plan.

(3) Deleted Per Amendment 22, 11-20-79

(4) Less than Four Loop Operation

PSEG Nuclear LLC shall not operate the reactor at power levels above P-7 (as defined in Table 3.3-1 of Specification 3.3.1.1 of Appendix A to this renewed license) with less than four (4) reactor coolant loops in operation until safety analyses for less than four loop operation have been submitted by the licensees and approval for less than four loop operation at power levels above P-7 has been granted by the Commission by Amendment of this renewed license.

(5) PSEG Nuclear LLC shall implement and maintain in effect all provisions of the approved fire protection program as described in the Updated Final Safety

(8) Iodine Monitoring

The licensee shall implement a program which will ensure the capability to accurately determine the airborne iodine concentration in vital areas under accident conditions. This program shall include the following:

1. Training of personnel;
2. Procedures for monitoring, and
3. Provisions for maintenance of sampling and analysis equipment.

(9) Backup Method for Determining Subcooling Margin

The licensee shall implement a program which will ensure the capability to accurately monitor the Reactor Coolant System subcooling margin. This program shall include the following:

1. Training of personnel, and
2. Procedures for monitoring.

(10) Additional Conditions

The Additional Conditions contained in Appendix C, as revised through Amendment No. 341, are hereby incorporated into this renewed license. PSEG Nuclear LLC shall operate the facility in accordance with the Additional Conditions.

(11) DELETED

(12) Constellation Energy Generation, LLC shall provide to the Director of the Office of Nuclear Reactor Regulation or the Director of the Office of Nuclear Material Safety and Safeguards, as applicable, a copy of any application, at the time it is filed, to transfer (excluding grants of security interests or liens) from Constellation Energy Generation, LLC to its direct or indirect parent, or to any other affiliated company, facilities for the production, transmission, or distribution of electric energy having a depreciated book value exceeding ten percent (10%) of Constellation Energy Generation, LLC's consolidated net utility plant, as recorded on Constellation Energy Generation, LLC's books of account.

(13) DELETED

(14) DELETED

(15) DELETED

APPENDIX C
ADDITIONAL CONDITIONS
OPERATING LICENSE NO. DPR-70

PSEG Nuclear LLC and Constellation Energy Generation, LLC shall comply with the following conditions on the schedules noted below:

Amendment Number	Additional Condition	Implementation Date
192	The licensee is authorized to relocate certain Technical Specification requirements to licensee-controlled documents. Implementation of this amendment shall include the relocation of these technical specification requirements to the appropriate documents, as described in the licensee's application dated January 11, 1996, as supplemented by letters dated February 26, May 22, June 27, July 12, December 23, 1996, and March 17, 1997, and evaluated in the staff's safety evaluation attached to this amendment.	The amendment shall be implemented within 60 days from March 21, 1997.
194	The licensee is authorized to upgrade the initiation circuitry for the power operated relief valves, as described in the licensee's application dated January 31, 1997, as supplemented by letters dated March 14, April 8, and April 28, 1997, and evaluated in the staff's safety evaluation attached to this amendment.	The amendment shall be implemented prior to entry into Mode 3 from the current outage for Salem Unit 1.
196	<p>Containment Fan Cooler Units</p> <p>The licensee shall complete all modifications associated with the amendment request concerning Containment Fan Cooler Units (CFCU) response time dated October 25, 1996, as described in the letters supplementing the amendment request dated December 11, 1996, January 28, March 27, April 24, June 3, and June 12, 1997, prior to entry into Mode 3 following refueling outage 12. All modifications made in support of this amendment request and described in the referenced submittals shall be in conformance with the existing design basis for Salem Unit 1, and programmatic controls for tank monitoring instrumentation shall be as described in the letter dated April 24, 1997. Post modification testing and confirmatory analyses shall be as described in the letter dated March 27, 1997. Future changes to the design described in these submittals may be made in accordance with the provisions of 10 CFR 50.59. Further, the administrative controls associated with CFCU operability and containment integrity described in the letters dated March 27, and April 24, 1997 shall not be relaxed or changed without prior staff review until such time as the license has been amended to include the administrative controls as technical specification requirements.</p>	The amendment shall be implemented prior to entry into Mode 3 from the current outage for Salem Unit 1.
198	The licensee shall perform an evaluation of the containment liner anchorage by November 30, 1997, for the loading induced on the containment liner during a Main Steam Line Break event to confirm the assumptions provided in the Preliminary Safety Analysis Report and Updated Final Safety Analysis Report.	The amendment shall be implemented within 30 days from July 17, 1997.



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

PSEG NUCLEAR LLC

CONSTELLATION ENERGY GENERATION, LLC

DOCKET NO. 50-311

SALEM NUCLEAR GENERATING STATION, UNIT NO. 2

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 322
Renewed License No. DPR-75

1. The U.S. Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Exelon Generation Company, LLC dated February 25, 2021, as supplemented by letters dated March 25, June 11, September 16, and September 29, 2021, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, Renewed Facility Operating License No. DPR-75 is hereby amended as indicated in the attachment to this license amendment.
3. This license amendment is effective as of the date of its issuance and shall be implemented within 15 days of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Bo M. Pham, Director
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Renewed Facility
Operating License

Date of Issuance: February 1, 2022

ATTACHMENT TO LICENSE AMENDMENT NO. 322
RENEWED FACILITY OPERATING LICENSE NO. DPR-75
SALEM NUCLEAR GENERATING STATION, UNIT NO. 2
DOCKET NO. 50-311

Replace the following pages of the Renewed Facility Operating License and Appendix C, Additional Conditions, 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-75

Page 1
Page 2
Page 3
Page 7

Appendix C

Page 1

Insert

License DPR-75

Page 1
Page 2
Page 3
Page 7

Appendix C

Page 1



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

PSEG NUCLEAR LLC

CONSTELLATION ENERGY GENERATION, LLC

DOCKET NO. 50-311

SALEM NUCLEAR GENERATING STATION, UNIT NO. 2

FACILITY OPERATING LICENSE

Renewed License No. DPR-75

1. The Nuclear Regulatory Commission (the Commission) having found that:
 - A. The application for a renewed license, filed by PSEG Nuclear LLC acting on its own behalf and as agent for Exelon Generation Company, LLC* complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's regulations set forth in 10 CFR Chapter I and all required notifications to other agencies or bodies have been duly made;
 - B. Construction of the Salem Nuclear Generating Station, Unit No. 2 (facility) has been substantially completed in conformity with Construction Permit No. CPPR-53 and the application, as amended, the provisions of the Act and the regulations of the Commission;
 - C. The facility will operate in conformity with the application, as amended, the provisions of the Act, and the regulations of the Commission;
 - D. There is reasonable assurance: (i) that the activities authorized by this renewed operating license 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 set forth in 10 CFR Chapter I;
 - E. PSEG Nuclear LLC is technically qualified to engage in the activities authorized by this renewed operating license in accordance with the Commission's regulations set forth in 10 CFR Chapter I;
 - F. The licensees are financially qualified to engage in the activities authorized by this renewed license in accordance with the Commission's regulations set forth in 10 CFR Chapter I;

* The Commission approved a transaction on November 16, 2021, that resulted in Exelon Generation Company, LLC being renamed Constellation Energy Generation, LLC. References to "the licensees" are to PSEG Nuclear LLC and Constellation Energy Generation, LLC.

- G. The licensees have satisfied the applicable provisions of 10 CFR Part 140, "Financial Protection Requirements and Indemnity Agreements," of the Commission's regulations;
 - H. The issuance of this renewed operating license will not be inimical to the common defense and security or to the health and safety of the public;
 - I. After weighing the environmental, economic, technical and other benefits of the facility against environmental and other costs and considering available alternatives, the issuance of Renewed Facility Operating License No. DPR-75 subject to the conditions for protection of the environment set forth herein is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied;
 - J. The receipt, possession, and use of source, byproduct and special nuclear material as authorized by this renewed license will be in accordance with the Commission's regulations in 10 CFR Parts 30, 40 and 70; and
 - K. Actions have been identified and have been or will be taken with respect to (1) managing the effects of aging during the period of extended operation on the functionality of structures and components that have been identified to require review under 10 CFR 54.21(a)(1), and (2) time-limited aging analyses that have been identified to require review under 10 CFR 54.21(c), such that there is reasonable assurance that the activities authorized by this renewed operating license will continue to be conducted in accordance with the current licensing basis, as defined in 10 CFR 54.3, for the facility, and that any changes made to the facility's current licensing basis in order to comply with 10 CFR 54.29(a) are in accordance with the Act and the Commission's regulations.
2. Pursuant to approval by the Nuclear Regulatory Commission at meetings on January 14, 1981, April 28, 1981, and May 19, 1981, the License for Fuel-Loading and Low-Power Testing issued on April 18, 1980 is superseded by Renewed Facility Operating License No. DPR-75 hereby issued to PSEG Nuclear LLC and Constellation Energy Generation, LLC (the licensees) to read as follows:
- A. This renewed license applies to the Salem Nuclear Generating Station, Unit No. 2, a pressurized water nuclear reactor and associated equipment (the facility), owned by the licensees. The facility is located on the southern end of Artificial Island on the east bank of the Delaware River in Lower Alloways Creek Township in Salem County, New Jersey and is described in the Final Safety Analysis Report as supplemented and amended and the Environmental Report as supplemented and amended.
 - B. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses:
 - (1) PSEG Nuclear LLC and Constellation Energy Generation, LLC to possess the facility at the designated location in Salem County, New Jersey, in accordance with the procedures and limitations set forth in the renewed license;
 - (2) PSEG Nuclear LLC, pursuant to Section 104b of the Act and 10 CFR part 50, "Domestic Licensing of Production and Utilization Facilities," to possess, use and operate the facility at the designated location in Salem County, New Jersey, in accordance with the limitations set forth in this renewed license;

- (3) PSEG Nuclear LLC, 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;
 - (4) PSEG Nuclear LLC, pursuant to the Act and 10 CFR Parts 30, 40 and 70, to receive, possess and use at any time any byproduct, source or special nuclear material as sealed neutron sources for reactor startup, sealed sources for reactor instrumentation and radiation monitoring equipment calibration and as fission detectors in amounts as required;
 - (5) PSEG Nuclear 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
 - (6) PSEG Nuclear 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 the facility.
- 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:
- (1) Maximum Power Level

PSEG Nuclear LLC is authorized to operate the facility at steady state reactor core power levels not in excess of 3459 megawatts (thermal).
 - (2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 321, and the Environmental Protection Plan contained in Appendix B, are hereby incorporated in the renewed license. PSEG Nuclear LLC shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

(26) Additional Conditions

The Additional Conditions contained in Appendix C, as revised through Amendment No. 322 are hereby incorporated into this renewed license. PSEG Nuclear LLC shall operate the facility in accordance with the Additional Conditions.

(27) DELETED

(28) Constellation Energy Generation, LLC shall provide to the Director of the Office of Nuclear Reactor Regulation or the Director of the Office of Nuclear Material Safety and Safeguards, as applicable, a copy of any application, at the time it is filed, to transfer (excluding grants of security interests or liens) from Constellation Energy Generation, LLC to its direct or indirect parent, or to any other affiliated company, facilities for the production, transmission, or distribution of electric energy having a depreciated book value exceeding ten percent (10%) of Constellation Energy Generation, LLC's consolidated net utility plant, as recorded on Constellation Energy Generation, LLC's books of account.

(29) DELETED

(30) DELETED

(31) DELETED

APPENDIX C
ADDITIONAL CONDITIONS
OPERATING LICENSE NO. DPR-75

PSEG Nuclear LLC and Constellation Energy Generation, LLC shall comply with the following conditions on the schedules noted below:

Amendment Number	Additional Condition	Implementation Date
175	The licensee is authorized to relocate certain Technical Specification requirements to licensee-controlled documents. Implementation of this amendment shall include the relocation of these technical specification requirements to the appropriate documents, as described in the licensee's application dated January 11, 1996, as supplemented by letters dated February 26, May 22, June 27, July 12, December 23, 1996, and March 17, 1997, and evaluated in the staff's safety evaluation attached to this amendment.	The amendment shall be implemented within 60 days from March 21, 1997.
177	The licensee is authorized to upgrade the initiation circuitry for the power operated relief valves, as described in the licensee's application dated January 31, 1997, as supplemented by letters dated March 14, April 8, and April 28, 1997, and evaluated in the staff's safety evaluation attached to this amendment.	The amendment shall be implemented prior to entry into Mode 3 from the current outage for Salem Unit 2.
179	<p>Containment Fan Cooler Units</p> <p>The licensee shall complete all modifications associated with the amendment request concerning Containment Fan Cooler Units (CFCU) response time dated October 25, 1996, as described in the letters supplementing the amendment request dated December 11, 1996, January 28, March 27, April 24, June 3, and June 12, 1997, prior to entry into Mode 3 following refueling outage 12. All modifications made in support of this amendment request and described in the referenced submittals shall be in conformance with the existing design basis for Salem Unit 1, and programmatic controls for tank monitoring instrumentation shall be as described in the letter dated April 24, 1997. Post modification testing and confirmatory analyses shall be as described in the letter dated March 27, 1997. Future changes to the design described in these submittals may be made in accordance with the provisions of 10 CFR 50.59. Further, the administrative controls associated with CFCU operability and containment integrity described in the letters dated March 27, and April 24, 1997 shall not be relaxed or changed without prior staff review until such time as the license has been amended to include the administrative controls as technical specification requirements.</p>	The amendment shall be implemented prior to entry into Mode 3 from the current outage for Salem Unit 2.
181	The licensee shall perform an evaluation of the containment liner anchorage by November 30, 1997, for the loading induced on the containment liner during a Main Steam Line Break event to confirm the assumptions provided in the Preliminary Safety Analysis Report and Updated Final Safety Analysis Report.	The amendment shall be implemented within 30 days from July 17, 1997.



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

CONSTELLATION ENERGY GENERATION, LLC

DOCKET NO. 50-289

THREE MILE ISLAND NUCLEAR STATION, UNIT 1

AMENDMENT TO RENEWED FACILITY LICENSE

Amendment No. 302
Renewed License No. DPR-50

1. The U.S. Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Exelon Generation Company, LLC dated February 25, 2021, as supplemented by letters dated March 25, June 11, September 16, and September 29, 2021, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, Renewed Facility License No. DPR-50 is hereby amended as indicated in the attachment to this license amendment.
3. This license amendment is effective as of the date of its issuance and shall be implemented within 15 days of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Bruce A. Watson, Chief
Reactor Decommissioning Branch
Division of Decommissioning, Uranium
Recovery, and Waste Programs
Office of Nuclear Material Safety
and Safeguards

Attachment:
Changes to the Renewed Facility
License

Date of Issuance: February 1, 2022

ATTACHMENT TO LICENSE AMENDMENT NO. 302

RENEWED FACILITY LICENSE NO. DPR-50

THREE MILE ISLAND NUCLEAR STATION, UNIT 1

DOCKET NO. 50-289

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

Remove

License DPR-50
Pages 1 through 5

Appendix A
5-1a
6-2

Insert

License DPR-50
Pages 1 through 5

Appendix A
5-1a
6-2



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

CONSTELLATION ENERGY GENERATION, LLC

(Three Mile Island Nuclear Station, Unit 1)

DOCKET NO. 50-289

RENEWED FACILITY LICENSE

Renewed License No. DPR-50

1. The Nuclear Regulatory Commission (the Commission) having found that:
 - a. The application for a renewed license filed by the applicant 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 1 and all required notifications to other agencies or bodies have been duly made;
 - b. DELETED
 - c. The facility will be maintained in conformity with the application, as amended, the provisions of the Act and the rules and regulations of the Commission;
 - d. There is a reasonable assurance: (1) that the activities authorized by this renewed license can be conducted without endangering the health and safety of the public, and (2) that such activities will be conducted in compliance with the rules and regulations of the Commission;
 - e. Constellation Energy Generation, LLC is technically and financially qualified to engage in the activities authorized by this renewed operating license in accordance with the rules and regulations of the Commission;
 - f. Constellation Energy Generation, LLC has satisfied the applicable provisions of 10 CFR Part 140, "Financial Protection Requirements and Indemnity Agreements," of the Commission's regulations;
 - g. The issuance of this renewed license will not be inimical to the common defense and security or to the health and safety of the public;
 - h. After weighing the environmental, economic, technical, and other benefits of the facility against environmental costs and considering available alternatives, the issuance of Renewed Facility License No. DPR-50 is in accordance with 10 CFR Part 50, Appendix D, of the Commission's regulations and all applicable requirements of said Appendix D have been satisfied;

- i. The receipt, possession, and use of source, byproduct and special nuclear material as authorized by this license will be in accordance with the Commission's regulations in 10 CFR Parts 30, 40, and 70, including 10 CFR Section 30.33, 40.32, 70.23 and 70.31; and
 - j. Actions have been identified and have been or will be taken with respect to (1) managing the effects of aging during the period of extended operation on the functionality of structures and components that have been identified to require review under 10 CFR 54.21(a)(1); and (2) time-limited aging analyses that have been identified to require review under 10 CFR 54.21(c), such that there is reasonable assurance that the activities authorized by the renewed operating license will continue to be conducted in accordance with the current licensing basis, as defined in 10 CFR 54.3, for the facility, and that any changes made to the facility's current licensing basis in order to comply with 10 CFR 54.29(a) are in accordance with the Act and the Commission's regulations.
2. Renewed Facility License No. DPR-50 is hereby issued to Constellation Energy Generation, LLC to read as follows:
- a. This renewed license applies to the Three Mile Island Nuclear Station, Unit 1, a pressurized water reactor and associated equipment (the facility), owned by Constellation Energy Generation, LLC. The facility is located in Dauphin County, Pennsylvania, and is described in the "Updated Final Safety Analysis Report (UFSAR)" as supplemented and amended and the Environmental Report as supplemented and amended.
 - b. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses:
 - (1) Constellation Energy Generation, LLC, pursuant to Section 104b of the Act and 10 CFR Part 50, "Licensing of Production and Utilization Facilities," to possess and use the facility as required for fuel storage in accordance with the procedures and limitations set forth in this renewed license;
 - (2) Constellation Energy Generation, LLC, pursuant to the Act and 10 CFR Parts 30, 40 and 70, to possess at any time any byproduct, source and special nuclear material used previously as reactor fuel, sealed neutron sources used previously for reactor startup, as fission detectors, and sealed sources for reactor instrumentation and to possess and use at any time any byproduct, source and special nuclear material as sealed sources for radiation monitoring equipment calibration in amounts as required;

- (3) Constellation Energy Generation, LLC, pursuant to the Act and 10 CFR Parts 30, 40 and 70, to receive, possess at either TMI-1 or TMI-2, and use in amounts as required for TMI-1 any byproduct, source or special nuclear material without restriction to chemical or physical form, for sample analysis, testing, instrument calibration, or associated with radioactive apparatus or components. Other than radioactive apparatus and components to be used at TMI Unit 2 in accordance with the TMI-2 License, the radioactive apparatus and components that may be moved from TMI Unit 1 to TMI Unit 2 under this provision shall be limited to: (1) outage-related items (such as contaminated scaffolding, tools, protective clothing, portable shielding and decontamination equipment); and (2) other equipment belonging to TMI Unit 1 when storage of such equipment at TMI-2 is deemed necessary for load handling or contamination control considerations;
- (4) Constellation Energy Generation, LLC, pursuant to the Act and 10 CFR Parts 30 and 70, to possess at the TMI Unit 1 or Unit 2 site, but not separate, such byproduct and special nuclear materials that were produced by the operation of either unit. Radioactive waste may be moved from TMI Unit 2 to TMI Unit 1 under this provision for collection, processing (including decontamination), packaging, and temporary storage prior to disposal. Radioactive waste that may be moved from TMI Unit 1 to TMI Unit 2 under this provision shall be limited to: (1) dry active waste (DAW) temporarily moved to TMI Unit 2 during waste collection activities, and (2) contaminated liquid contained in shared system piping and tanks. Radioactive waste that may be moved from TMI Unit 1 to TMI Unit 2 under this provision shall not include spent fuel, spent resins, filter sludge, evaporator bottoms, contaminated oil, or contaminated liquid filters.

The storage of radioactive materials or radwaste generated at TMI Unit 2 and stored at TMI Unit 1 shall not result in a source term that, if released, would exceed that previously analyzed in the UFSAR in terms of off-site dose consequences.

The storage of radioactive materials or radwaste generated at TMI Unit 1 and stored at TMI Unit 2 shall not result in a source term that, if released, would exceed that previously analyzed in the PDMS SAR for TMI Unit 2 in terms of off-site dose consequences.

- c. This renewed license shall be deemed to contain and is subject to the conditions specified in the following Commission regulations 10 CFR Chapter I: Part 20, Section 30.34 of Part 30, Section 40.41 of Part 40, Section 50.54 and 50.59 of Part 50, and Section 70.32 of Part 70; 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) DELETED

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 302, are hereby incorporated in the license. Constellation Energy Generation, LLC shall maintain the facility in accordance with the Permanently Defueled Technical Specifications (PDTS).

(3) Physical Protection

Constellation Energy Generation, LLC shall fully implement and maintain in effect all provisions of the Commission-approved physical security, training and qualification, and safeguards contingency plans including amendments made pursuant to 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, submitted by letter dated May 17, 2006, is entitled: "Three Mile Island Nuclear Station Security Plan, Training and Qualification Plan, and Safeguards Contingency Plan, Revision 3." The set contains Safeguards Information protected under 10 CFR 73.21.

(4) DELETED

(5) DELETED

(6) Inservice Testing - DELETED

(7) Aircraft Movements - DELETED

(8) Repaired Steam Generators - DELETED

(9) Long Range Planning Program - DELETED

Sale and License Transfer Conditions

(10) Constellation Energy Generation, LLC shall provide to the Director of the Office of Nuclear Reactor Regulation or the Director of the Office of Nuclear Material Safety and Safeguards, as applicable, a copy of any application, at the time it is filed, to transfer (excluding grants of security interests or liens) from Constellation Energy Generation, LLC to its direct or indirect parent, or to any other affiliated company, facilities for the production, transmission, or distribution of electric energy having a depreciated book value exceeding ten percent (10%) of Constellation Energy Generation, LLC's consolidated net utility plant, as recorded on Constellation Energy Generation, LLC's books of account.

(11) DELETED

(12) DELETED

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

(13) DELETED

(14) DELETED

(15) Constellation Energy Generation, LLC shall take all necessary steps to ensure that the decommissioning trust is maintained in accordance with the application, the requirements of the Order Approving Transfer of License and Conforming Amendment, dated January 8, 2009, and the related Safety Evaluation dated December 23, 2008.

(16) DELETED

(17) Mitigation Strategy License Condition

The licensee shall develop and maintain strategies for addressing large fires and explosions and that include the following key areas:

(a) Fire fighting response strategy with the following elements:

1. Pre-defined coordinated fire response strategy and guidance
2. Assessment of mutual aid fire fighting assets
3. Designated staging areas for equipment and materials
4. Command and control
5. Training of response personnel

(b) Operations to mitigate fuel damage considering the following:

1. Protection and use of personnel assets
2. Communications
3. Minimizing fire spread
4. Procedures for implementing integrated fire response strategy
5. Identification of readily-available pre-staged equipment
6. Training on integrated fire response strategy
7. Spent fuel pool mitigation measures

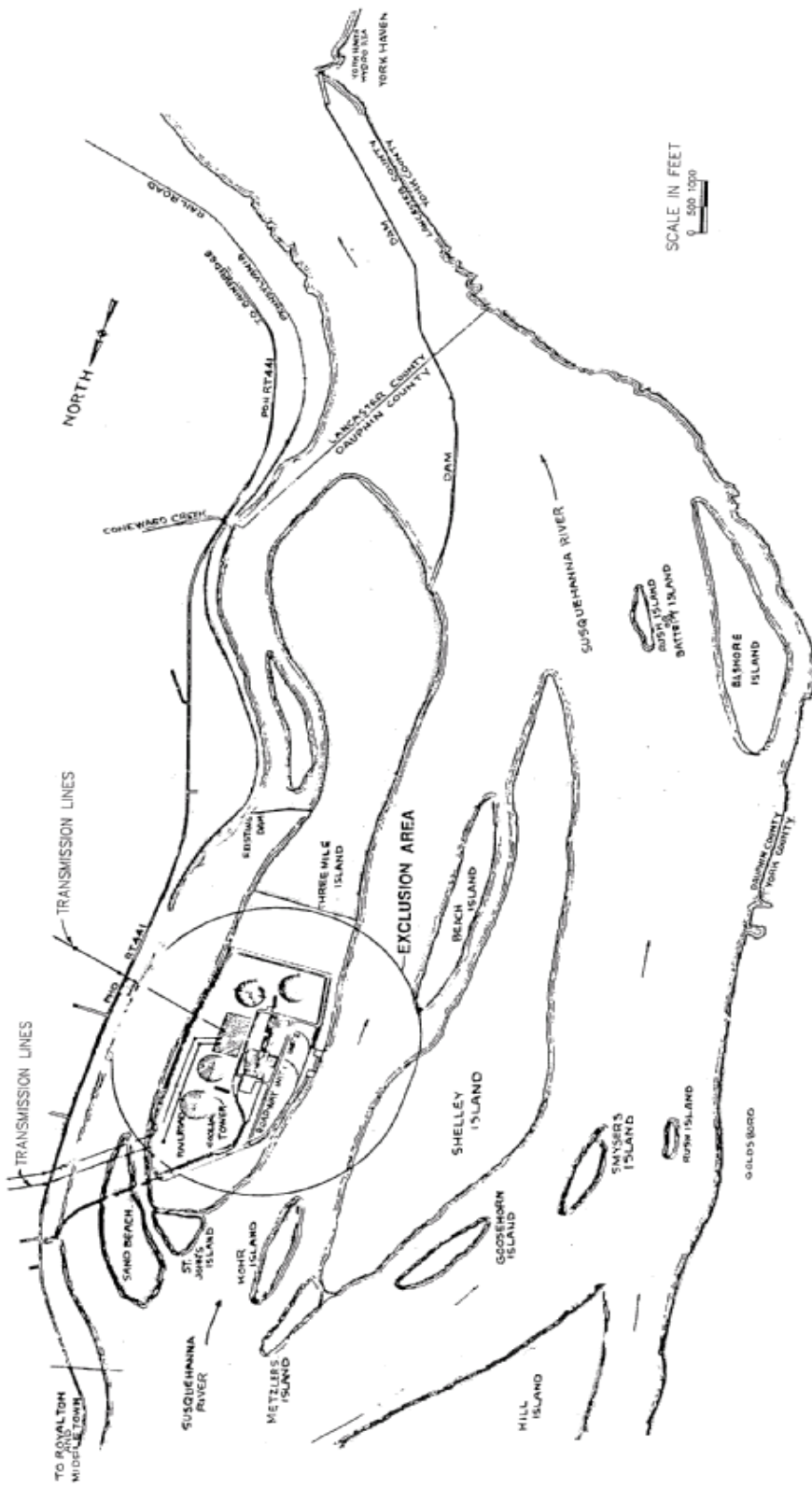
(c) Actions to minimize release to include consideration of:

1. Water spray scrubbing
2. Dose to onsite responders

(18) DELETED

(19) DELETED

(20) DELETED



Three Mile Island Nuclear Station
 EXTENDED PLOT PLAN
 CAD FILE: 6717R1,DWG FIG 5-1

Amendment No. 140, 216, 246, 278, 300, 302

- g. Except for the Shift Manager, shift crew composition may be one less than the minimum requirement of Specification 6.2.2.a for a period of time not to exceed 2 hours in order to accommodate unexpected absence of on-duty shift crew members provided immediate action is taken to restore the shift crew composition to within the minimum requirements and the following conditions are met:

- 1) No fuel movement is in progress;
- 2) No movement of loads over the spent fuel is in progress.

This provision does not permit any shift crew position to be unstaffed upon shift change due to an incoming shift crewman being late or absent.

6.3 FACILITY STAFF QUALIFICATIONS

6.3.1 Each member of the facility staff shall meet or exceed the minimum qualifications referenced for comparable positions specified in the Constellation Energy Generation, LLC Decommissioning Quality Assurance Program (DQAP).

6.3.2 The NRC-approved training and retraining program for CERTIFIED FUEL HANDLERS shall be maintained.

6.4 DELETED

6.5 DELETED

6.6 DELETED

6.7 DELETED



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

CALVERT CLIFFS NUCLEAR POWER PLANT, LLC

CONSTELLATION ENERGY GENERATION, LLC

DOCKET NO. 72-8

CALVERT CLIFFS INDEPENDENT SPENT FUEL STORAGE INSTALLATION

AMENDMENT TO RENEWED MATERIALS LICENSE

Amendment No. 12
Renewed License No. SNM-2505

1. The U.S. Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Exelon Generation Company, LLC dated February 25, 2021, as supplemented by letters dated March 25, June 11, September 16, and September 29, 2021, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The Calvert Cliffs Independent Spent Fuel Storage Installation 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, Renewed Materials License No. SNM-2505 is hereby amended as indicated in the attachment to this license amendment.
3. This license amendment is effective as of the date of its issuance and shall be implemented within 15 days of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Yaira K. Diaz-Sanabria, Chief
Storage and Transportation Licensing Branch
Division of Fuel Management
Office of Nuclear Material Safety
and Safeguards

Attachment:
Changes to the Renewed Materials
License

Date of Issuance: February 1, 2022

ATTACHMENT TO LICENSE AMENDMENT NO. 12

RENEWED MATERIALS LICENSE NO. SNM-2505

CALVERT CLIFFS INDEPENDENT SPENT FUEL STORAGE INSTALLATION

DOCKET NO. 72-8

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

Remove

License SNM-2505

1 through 5

Technical Specifications

ii

iii

17

Insert

License SNM-2505

1 through 5

Technical Specifications

ii

iii

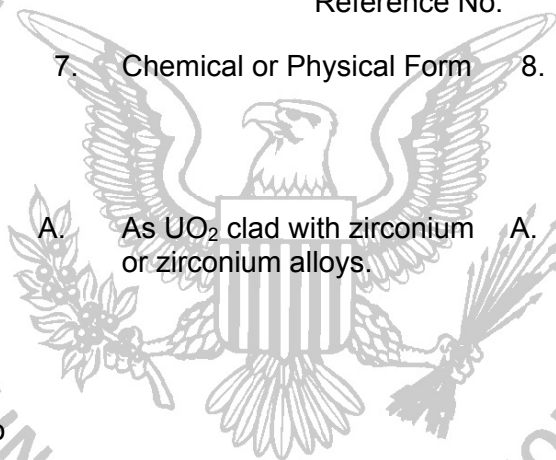
17

LICENSE FOR INDEPENDENT STORAGE OF SPENT NUCLEAR FUEL AND HIGH-LEVEL RADIOACTIVE WASTE

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974 (Public Law 93-438), and Title 10, *Code of Federal Regulations*, Chapter 1, Part 72, and in reliance on statements and representations heretofore made by the licensee, a license is hereby issued authorizing the licensee to receive, acquire, and possess the power reactor spent fuel and other radioactive materials associated with spent fuel storage designated below; to use such material for the purpose(s) and at the place(s) designated below; and to deliver or transfer such material to persons authorized to receive it in accordance with the regulations of the applicable Part(s). This license shall be deemed to contain the conditions specified in Section 183 of the Atomic Energy Act of 1954, as amended, and is subject to all applicable rules, regulations, and orders of the Nuclear Regulatory Commission now or hereafter in effect and to any conditions specified herein.

Licensee

- | | | |
|---|---|--|
| 1. Calvert Cliffs Nuclear Power Plant, LLC
(Owner)
Constellation Energy Generation, LLC,
formerly Exelon Generation Company,
LLC, (Operator) | 3. License No. | Renewed License SNM-2505 |
| | Amendment No. | 12 |
| 2. 300 Exelon Way
Kennett Square, PA 19348 | 4. Expiration | November 30, 2052 |
| | 5. Docket or Reference No. | 72-8 |
| 6. Byproduct, Source, and/or
Special Nuclear Material | 7. Chemical or Physical Form | 8. Maximum Amount That
Licensee May Possess at Any
One Time Under This License |
| A. Spent fuel assemblies from
Calvert Cliffs Nuclear Station
Units 1 and 2 reactor using
natural water for cooling and
enriched not greater than 5.0
percent U-235 and associated
radioactive materials related to
receipt, storage, and transfer
of fuel assemblies. | A. As UO ₂ clad with zirconium
or zirconium alloys. | A. 1,558.27 TeU of spent fuel
assemblies. |



9. Authorized Use: For use in accordance with the conditions in this license and the attached Technical Specifications. The basis for this amendment was submitted in the application dated February 25, 2021, as supplemented on March 25, June 11, September 16, and September 29, 2021.

The material identified in 6.A and 7.A above is authorized for receipt, possession, storage, and transfer.

10. Authorized Place of Use: The licensed material is to be received, possessed, transferred, and stored at the Calvert Cliffs Independent Spent Fuel Storage Installation (ISFSI) located on the Calvert Cliffs Nuclear Power Plant site in Calvert County, Maryland. This site is described in Chapter 2 of the licensee's Safety Analysis Report (SAR) for the Calvert Cliffs ISFSI.
11. The Technical Specifications contained in Appendix A attached hereto are incorporated into the license. Constellation Energy Generation, LLC, shall operate the installation in accordance with the Technical Specifications in Appendix A.

NRC FORM 588A (10-2000) 10 CFR 72	U. S. NUCLEAR REGULATORY COMMISSION		PAGE 2 OF 5 PAGES
	LICENSE FOR INDEPENDENT STORAGE OF SPENT NUCLEAR FUEL AND HIGH-LEVEL RADIOACTIVE WASTE SUPPLEMENTARY SHEET		License No. _____ Renewed Materials License SNM-2505 Docket or Reference No. _____

12. Constellation Energy Generation, LLC, shall fully implement and maintain in effect all provisions of the independent spent fuel storage installation physical security, guard training and qualification, and safeguards contingency plans previously approved by the Commission and all amendments made pursuant to the authority of 10 CFR 72.56, 10 CFR 72.44(e) and 72.186.
13. The Technical Specifications for Environmental Protection contained in Appendix A attached hereto are incorporated into the license.

Specifications required pursuant to 10 CFR 72.44(d), stating limits on the release of radioactive materials for compliance with limits of 10 CFR Part 20 and "as low as is reasonably achievable objective" for effluents are not applicable. Dry Shielded Canister (DSC) external surface contamination within the limits of Technical Specification 3.2.3.1 ensures that the offsite dose will be inconsequential. In addition, there are no normal or off-normal releases or effluents expected from the double-sealed storage canisters of the ISFSI.

Specifications required pursuant to 10 CFR 72.44(d)(1) for operating procedures, for control of effluents, and for the maintenance and use of equipment in radioactive waste treatment systems to meet the requirements of 10 CFR 72.104 are not applicable. There are, by the design of the sealed storage canisters at the ISFSI, no effluent releases. Also, all Calvert Cliffs site DSC and Transfer Cask (TC) loading and unloading operations and waste treatment there from will occur at the Calvert Cliffs Nuclear Power Plant under the specifications of its operating licenses.

14. The design, construction, and operation of the ISFSI shall be accomplished in accordance with the NRC regulations specified in Title 10 of the U.S. *Code of Federal Regulations*. All commitments to the applicable NRC Regulatory Guides and to engineering and construction codes shall be carried out.
15. The double closure seal welds at the bottom end of the DSC shall satisfy the Liquid Penetrant Acceptance Standards of ASME B&PV Code Section III, Division 1, Subsection NB-5350 (1983) for the NUHOMS-24P and NUHOMS-32P DSCs. The double closure seal welds at the bottom of the DSC shall satisfy the Liquid Penetrant Acceptance Standards of ASME B&PV Code Section III, 1, Subsection NB-5350 (1998 with addenda up to and including 1999) for the NUHOMS 32-PHB DSCs. The seal welds at the bottom of the NUHOMS-24P and NUHOMS-32P DSCs shall be leak tested in accordance with ANSI N14.5 (1987). For the NUHOMS-32PHB, the entire confinement boundary, including DSC shell and bottom cover plate, seal welds at bottom end of DSC, and longitudinal and circumferential DSC shell welds, shall undergo a fabrication leakage test in accordance with ANSI N14.5-1997; acceptance criterion shall be less than 1E-7 atm cc/sec helium.
16. Fuel and TC movement and handling activities which are to be performed in the Calvert Cliffs Nuclear Power Plant Auxiliary Building will be governed by the requirements of the Constellation Energy Generation, LLC, Facility Operating Licenses (DRP-53 and -69) and associated Technical Specifications.
17. Pursuant to 10 CFR 72.7, the licensee is hereby exempted from the provisions of 10 CFR 72.122(i) with respect to providing instrumentation and control systems for the DSC and HSM during storage operations.
18. Within 90 days after issuance of the license, the licensee shall submit an updated safety analysis report (USAR), and continue to update the SAR pursuant to the requirements in 10 CFR 72.70(b) and (c).

The USAR shall include Attachment 4 to the Response to Fourth Request for Additional Information for Renewal Application, "ISFSI Updated Safety Analysis Report Supplement and Changes" [Agency

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Document (ADAMS) Accession Number ML14267A065] as documented in the supplemented License Renewal Application (hereinafter referred to as Attachment 4). The licensee may make changes to the USAR, including changes to Attachment 4, consistent with 10 CFR 72.48(c).

19. Constellation Energy Generation, LLC, shall update, revise or create, procedures for implementing the activities in the Aging Management Programs (AMPs) summarized in Attachment 4 within 180 day of the renewed license issuance.

The licensee shall maintain procedures that implement the AMPs throughout the term of this license.

Each procedure for implementing the AMPs shall contain a reference to the specific AMP provision the procedure is intended to implement. The reference shall be maintained if procedures are modified.

Within 240 days of issuance of the renewed license, the licensee shall confirm, in a letter to the Commission (submitted pursuant to 10 CFR 72.4), that: the procedures for implementation of the activities as described in the AMPs summarized in Attachment 4 are in place, that the procedures will be maintained for the term of this license, and that appropriate references to the AMPs are provided in the procedures.

20. The licensee shall not remove (a) any structure, system or component (SSC) or subcomponent, or (b) any aging mechanism or aging effect, as detailed in Tables 9.6-1 through 9.6-4 in Attachment 4, from the scope of the AMPs.
21. With respect to the aging management activities for the Horizontal Storage Module (HSM), as described in the "HSM Aging Management Program" in Attachment 2 to the Response to Fourth Request for Additional Information for Renewal Application:
- (a) The licensee shall perform visual inspections of accessible exterior surfaces of the HSM concrete, including any exposed reinforcing steel and steel embedments. The inspections shall be performed at intervals not to exceed one year.
 - (b) The licensee shall perform visual inspections for a minimum of five targeted HSMs to be selected based on the results of the inspections per Condition 21(a). The targeted visual inspections shall be performed at intervals not to exceed every five years. The licensee shall evaluate for loss of intended function for inspection results meeting Tier 2 or Tier 3 acceptance criteria in ACI 349.3R-02.
 - (c) The licensee shall perform subsequent visual inspections of the interior surfaces of HSM-1 and HSM-15, first inspected in June 2012 [Agency Document (ADAMS) Accession Number ML12212A216], at intervals not to exceed every five years. These inspections will focus on the interior concrete and steel subcomponents, including the DSC support structure. The licensee shall evaluate for loss of intended function for inspection results meeting Tier 2 or Tier 3 acceptance criteria in ACI 349.3R-02.
 - (d) The licensee shall obtain groundwater chemistry samples representative of the HSM below-grade environment for a minimum of 3 locations at intervals not to exceed every five years. The licensee shall characterize these groundwater chemistry samples to monitor for an aggressive below-grade environment, as defined in ASME Code Section XI Subsection IWL.

22. Constellation Energy Generation, LLC, shall submit an evaluation of the results of the confirmatory evaluation related to high burnup fuel cladding performance specified in the "High Burnup Fuel Aging

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Management Program” in Attachment 2 to the Response to Fourth Request for Additional Information for Renewal Application, in a letter to the NRC (submitted pursuant to 10 CFR 72.4), by April 30, 2028. The evaluation shall include an assessment of the ability of stored high burnup fuel assemblies to continue to perform the intended function(s). If the licensee identifies fuel which is unable to perform the intended function(s), the licensee shall cease use of such cask or submit a license amendment request to modify this license condition.

23. With respect to the aging management activities for the Dry Shielded Canister (DSC), as described in the “DSC External Surfaces Aging Management Program” in Attachment 2 to the Response to Fourth Request for Additional Information for Renewal Application (hereinafter referred to as Attachment 2), the licensee must perform the inspections at intervals not to exceed 5 years:
- (a) The licensee shall perform DSC inspections on canisters that are determined to be most susceptible to aging effects. The licensee shall include DSC-6 in HSM-15 and DSC-11 in HSM-1 in inspections throughout the duration of the renewed license period. The licensee shall continue to obtain samples using method(s) that will allow DSC surface deposits to be collected and analyzed.
 - (b) The licensee shall perform inspections of DSC external surfaces using proven technology reasonably available at the time the inspection is conducted which is capable of meeting the physical access and environmental constraints of the HSM interior.
 - i. At a minimum, the licensee shall perform the inspection identified in the DSC External Surfaces Aging Management Program, as described Attachment 2, which identifies remote visual inspection using inspection equipment capable of meeting ASME Section XI Article IWA-2210 VT-3 standards to the extent allowed by the inspection equipment.
 - ii. For areas outside of the range capable of being inspected to VT-3 standards, the licensee shall inspect and document these areas to the best of the ability of the inspector.
 - (c) Remote visual inspections performed by the licensee shall include the surfaces identified in the DSC External Surfaces Aging Management Program, as described Attachment 2. The licensee shall evaluate the condition of the DSC shell at the support rail contact region based on the appearance of the visible regions immediately adjacent to the crevice location. Remote visual inspections will cover the DSC surface areas to the maximum extent practicable including;
 - i. The bottom end of the DSC visible from the HSM doorway opening including the grapple ring, and excluding areas obstructed by the seismic restraint and the sides of bottom shield plug where access is restricted by the small HSM doorway gap;
 - ii. The top cover including the closure weld and excluding areas obstructed by the HSM rail back stops;
 - iii. The DSC shell from and including the center circumferential weld (WJ-3) to the top end of the DSC (near the back wall of the HSM), including the longitudinal weld in this region (WJ-2) and excluding the portion of the shell obstructed by the HSM rails;
 - iv. The portion of the DSC shell from the center circumferential weld to the bottom end of the DSC (near the HSM doorway), including the longitudinal weld in this region (WJ-1) and excluding the portion of the shell obstructed by the HSM rails.

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- (d) The licensee shall use inspection acceptance criteria defined in the Dry Shielded Canister (DSC) External Surfaces Aging Management Program included in Attachment 2 to the Response to Fourth Request for Additional Information for Renewal Application:
- i. Acceptable signifies that a component is free of significant deficiencies or degradation that could lead to the loss of intended function.
 - ii. Acceptable with Defects signifies that a component contains deficiencies or degradation new or increased areas of pitting, crevice corrosion, or staining, compared to the baseline but will remain able to perform its design basis function until the next inspection.
 - iii. Unacceptable signifies a component contains deficiencies or degradation that either prevents (or could prevent prior to the next inspection the ability to perform their intended function such as a positive identification of the presence of cracks on the DSC surface with length exceeding the requirements of ASME Section XI Table IWB-3514-2 acceptance criteria for surface examination of in-service austenitic steel components.
 - iv. In the event of an inspection finding other than acceptable as described in (d)(i) above, the licensee shall issue a condition report in the site corrective action program to drive further evaluation, characterization, and other actions as needed to preserve the DSC intended functions. The cask may not develop through wall cracking or any other through wall breach that places the licensee out of compliance with 72.122(h)(5), and which the licensee is unable to, through corrective actions, return the DSC to its approved design basis. If the licensee identifies such through wall cracking or other through wall breach and is unable, through corrective actions, to return the DSC to its approved design basis, the licensee shall cease use of such cask or submit a license amendment request to modify this license condition.

This renewed license is effective as of the date of issuance shown below.

FOR THE U.S. NUCLEAR REGULATORY COMMISSION

Yoira K. Diaz-Sanabria, Chief
 Storage and Transportation Licensing Branch
 Division of Fuel Management
 Office of Nuclear Material Safety
 and Safeguards
 Washington, DC 20555

Date of Issuance: October 23, 2014
 Amendment No. 12: February 1, 2022
 Attachment: Technical Specifications

REVISION HISTORY

	Page: Section	Change Description
Amendment No. 12	Page 17: 6.1	Changed the name of the operator to Constellation Energy Generation, LLC.
Renewed License Amendment No. 1	Table of contents Page 3: 2.1 Page 6: 3.1.1 Page 9: 3.2.2.1, 3.2.2.2, 4.2.2.2 Page 12: 3/4.3.2 Page 13: 3/4.3.3 Page 14: 3.4.1.1, 4.4.1.1, 4.4.1.2 Page 16: 5.2	Added Sections 3/4.3.2 and 3/4.3.3. Renumbered pages. Added neutron source per assembly for NUHOMS-32PHB canister. Added gamma source per assembly for NUHOMS-32PHB canister. Added initial enrichment, maximum assembly average burnup, maximum heat generation rate and maximum assembly mass for NUHOMS-32PHB DSCs. Added weld acceptance standards and helium leakrate limits for NUHOMS-32PHB DSCs. Added new Specification 3/4.3.2 Added new Specification 3/4.3.3. Added temperature rise limit for HSM-HB. Added B10 areal density limits for NUHOMS-32PHB DSCs.
Amendment No. 10	Page 13	Added Exelon Generation Company, LLC to Section 6.1.
Amendment No. 9	Pages 1 and 1A Page 2: 2.1 Page 5: 3.1.1(3),(8),(9) Page 11: 3.4.1.1 Page 13:5.3	Added definitions of INTACT FUEL and UNDEGRADED FUEL ASSEMBLIES Changed neutron source term for NUHOMS-32P canister. Added gamma source term for NUHOMS-32P canister. Increased allowable maximum burnup for a NUHOMS-32P canister. Revised conditions for clarification. Increased the allowable air temperature rise from the horizontal storage module (HSM) inlet to the HSM outlet. Added TS 5.3 – Combustible gas monitoring during top shield plug lid welding and cutting
Amendment No. 8	Page 13: 6.1	Changed the name of the operator to Calvert Cliffs Nuclear Power Plant, LLC

	Page: Section	Change Description
Amendment No. 7	NA	Change in Final Safety Analysis Report design basis limit for the dry shielded canister, no changes to Technical Specifications
Amendment No. 6	Table of contents Page 2: 2.1 Page 5: 3.1.1(4), 3.1.1(5), 3.3.1(6), 3.3.1(7), and 3.3.1(9) Page 7: 3.2.1.1, 4.2.1.1, and 4.2.1.2	Renumbered section 5.1, and added section 5.2 Changed SAR table reference and added neutron source term for NUHOMS-32P canister Made changes to support use of either NUHOMS-24P or NUHOMS-32P canister increased the required spent fuel pool boron concentration, increased surveillance requirement action times.
	Page 5: 5.1 and 5.2	Renumbered section 5.1, and added section 5.2
Amendment No. 5	Page 4: Section 2.3	Removed reference to Transfer Cask drop height limit.
	Page 13: Section 6.3	Changed semi-annual reporting period to annual reporting period and corrected typographical error.
Amendment No. 4	NA	Change in Final Safety Analysis Report aircraft hazards analysis, no changes to Technical Specifications
Amendment No. 3	Pages 1-13	Renumbered and updated page format.
	Previous page iv: Introduction	Corrected typographical error.
	Previous pages B 2-1 - B 2-4	Removed Bases Section.
	Previous page 3/4 1-1: 3.1.1	Editorial change for clarity.
	Previous page 3/4 4-1: 3.4.1.1	Corrected typographical error.
	Previous pages B 3/4-1 - B 3/4-5	Removed Bases Section.
Amendment No. 2	6-1: 6.1	Changed operator name from Baltimore Gas and Electric Company to Calvert Cliffs Nuclear Power Plant, Inc.
Amendment No. 1	2-2: 2.2.1	Added "*" paragraph on vacuum drying exemption for first and second DSC.
	B2-2: 2.2.1	Added "*" paragraph on basis for vacuum drying exemption for first and second DSC.

5.0 DESIGN FEATURES

5.1 GENERAL

The Calvert Cliffs ISFSI design approval was based upon review of specific design drawings, some of which have been deemed appropriate for inclusion in the Calvert Cliffs ISFSI Safety Evaluation Report (SER). Drawings listed in Section 1.5 of the Calvert Cliffs ISFSI SER have been reviewed and approved by the NRC. These drawings may be revised under the provisions of 10 CFR 72.48 as appropriate.

5.2 NUHOMS-32P AND NUHOMS-32PHB DRY SHIELDED CANISTER (DSC)

The NUHOMS-32P DSC poison plates shall have a minimum B10 areal density of 0.0100g/cm². The NUHOMS-32PHB DSC poison plates shall have a minimum B10 areal density of 0.019 g/cm² for basket type A and 0.027 g/cm² for basket type B.

5.3 COMBUSTIBLE GAS MONITORING DURING TOP SHIELD PLUG LID WELDING AND CUTTING

During top shield plug lid-to-shell welding and cutting operations, combustible gas monitoring of the space under the top shield plug lid is required, to ensure that there is no combustible mixture present.

6.0 ADMINISTRATIVE CONTROLS

6.1 GENERAL

The Calvert Cliffs ISFSI is located on the Calvert Cliffs Nuclear Power Plant site and will be managed and operated by the Constellation Energy Generation, LLC staff. The administrative controls shall be in accordance with the requirements of the Calvert Cliffs Nuclear Power Plant Facility Operating Licenses (DPR-53 and -69) and associated Technical Specifications as appropriate.

6.2 ENVIRONMENTAL MONITORING PROGRAM

The licensee shall include the Calvert Cliffs ISFSI in the environmental monitoring for Calvert Cliffs Nuclear Power Plant. An environmental monitoring program is required pursuant to 10 CFR 72.44(d)(2).

6.3 ANNUAL ENVIRONMENTAL REPORT

The annual radioactive effluent release reports under 10 CFR 50.36(a)(2) license requirements for the Calvert Cliffs Nuclear Power Plant shall also specify the quantity, if any, of each of the principal radionuclides released to the environment in liquid and gaseous effluents during the ISFSI operation and such other information as may be required by the Commission to estimate maximum potential radiation dose commitment to the public resulting from effluent releases. Copies of these reports shall be submitted to the NRC Region I office and to the Director, Office of Nuclear Material Safety and Safeguards. The report under this specification is required pursuant to 10 CFR 72.44(d)(3).