



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

March 1, 2023

Mr. David P. Rhoades
Senior Vice President
Constellation Energy Generation, LLC
President and Chief Nuclear Officer
Constellation Nuclear
4300 Winfield Road
Warrenville, IL 60555

SUBJECT: BRAIDWOOD STATION, UNITS 1 AND 2, BYRON STATION, UNIT NOS. 1 AND 2, AND R. E. GINNA NUCLEAR POWER PLANT- ISSUANCE OF AMENDMENTS NOS. 231 AND 231, 232 AND 232, AND 154 REGARDING ADOPTION OF TSTF-246 (EPID L-2022-LLA-0043)

Dear Mr. Rhoades:

The U.S. Nuclear Regulatory Commission (the Commission) has issued the enclosed Amendment No. 231 to Renewed Facility Operating License No. NPF-72 and Amendment No. 231 to Renewed Facility Operating License No. NPF-77 for the Braidwood Station, Units 1 and 2, respectively, Amendment No. 232 to Renewed Facility Operating License No. NPF-37 and Amendment No. 232 to Renewed Facility Operating License No. NPF-66 for the Byron Station, Unit Nos. 1 and 2, respectively, and amendment 154 to Renewed License No. DPR-18 for R. E. Ginna Nuclear Power Plant. The amendments are in response to your application dated March 24, 2022.

The amendments are consistent with NRC-approved Technical Specifications Task Force (TSTF) Traveler 246 (TSTF-246), Revision 0, "RTS [reactor trip system] Instrumentation, [Technical Specification] TS 3.3.1 Condition F Completion Time," dated February 20, 1998, which revised the completion time of the limiting conditions for operation, TS 3.3.1, Condition F, from 2 hours to 24 hours.

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

Sincerely,

/RA/

Joel S. Wiebe, Senior Project Manager
Plant Licensing Branch III
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. STN 50-456, STN 50-457,
STN 50-454, STN 50-455, and 50-244

Enclosures:

1. Amendment No. 231 to NPF-72
2. Amendment No. 231 to NPF-77
3. Amendment No. 232 to NPF-37
4. Amendment No. 232 to NPF-66
5. Amendment No. 154 to DPR-18
6. Safety Evaluation

cc: Listserv



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. 231
Renewed License No. NPF-72

1. The U.S. Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Constellation Energy Generation, LLC (the licensee) dated March 24, 2022, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance: (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the renewed license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Renewed Facility Operating License No. NPF-72 is hereby amended to read as follows:

- (2) Technical Specifications

The Technical Specifications contained in Appendix A as revised through Amendment No. 231 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. This license amendment is effective as of the date of its issuance and shall be implemented within 60 days of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Robert F. Kuntz, Acting Chief
Plant Licensing Branch III
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

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

Date of Issuance: March 1, 2023



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. 231
Renewed License No. NPF-77

1. The U.S. Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Constellation Energy Generation, LLC (the licensee) dated March 24, 2022, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance: (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the renewed license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Renewed Facility Operating License No. NPF-77 is hereby amended to read as follows:

- (2) Technical Specifications

The Technical Specifications contained in Appendix A as revised through Amendment No. 231 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. This license amendment is effective as of the date of its issuance and shall be implemented within 60 days of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Robert F. Kuntz, Acting Chief
Plant Licensing Branch III
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

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

Date of Issuance: March 1, 2023

ATTACHMENT TO LICENSE AMENDMENT NOS. 231 AND 231

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 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.

Renewed Facility Operating Licenses

REMOVE

INSERT

License NPF-72

License NPF-72

-3-

-3-

License NPF-77

License NPF-77

-3-

-3-

Technical Specifications

REMOVE

INSERT

3.3.1 – 5

3.3.1 – 5

- (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. 231 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.

- (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. 231 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.

Renewed License No. NPF-77
Amendment No. 231

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
F. One Intermediate Range Neutron Flux channel inoperable.	F.1 Reduce THERMAL POWER to < P-6.	24 hours
	<u>OR</u> F.2 Increase THERMAL POWER to > P-10.	24 hours
G. Two Intermediate Range Neutron Flux channels inoperable.	G.1 Suspend operations involving positive reactivity additions.	Immediately
	<u>AND</u> G.2 Reduce THERMAL POWER to < P-6.	2 hours
H. One Source Range Neutron Flux channel inoperable.	H.1 Suspend operations involving positive reactivity additions.	Immediately
I. Two Source Range Neutron Flux channels inoperable.	I.1 Open Reactor Trip Breakers (RTBs).	Immediately
J. One Source Range Neutron Flux channel inoperable.	J.1 Restore channel to OPERABLE status.	48 hours
	<u>OR</u> J.2.1 Initiate action to fully insert all rods.	48 hours
	<u>AND</u> J.2.2 Place the Rod Control System in a condition incapable of rod withdrawal.	49 hours

(continued)



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. 232
Renewed License No. NPF-37

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Constellation Energy Generation, LLC (the licensee) dated March 24, 2022, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance: (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the renewed license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Renewed Facility Operating License No. NPF-37 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A as revised through Amendment No. 232 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. This license amendment is effective as of the date of its issuance and shall be implemented within 60 days of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Robert F. Kuntz, Acting Chief
Plant Licensing Branch III
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

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

Date of Issuance: March 1, 2023



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. 232
Renewed License No. NPF-66

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Constellation Energy Generation, LLC (the licensee) dated March 24, 2022, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance: (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Renewed Facility Operating License No. NPF-66 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A (NUREG-1113), as revised through Amendment No. 232, 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. This license amendment is effective as of the date of its issuance and shall be implemented within 60 days of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Robert F. Kuntz, Acting Chief
Plant Licensing Branch III
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

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

Date of Issuance: March 1, 2023

ATTACHMENT TO LICENSE AMENDMENT NOS. 232 AND 232

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 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.

Renewed Facility Operating Licenses

REMOVE

INSERT

License NPF-37

License NPF-37

-3-

-3-

License NPF-66

License NPF-66

-3-

-3-

Technical Specifications

REMOVE

INSERT

3.3.1 – 4

3.3.1 - 4

- (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 power) in accordance with the conditions specified herein.

(2) Technical Specifications

The Technical Specifications contained in Appendix A as revised through Amendment No. 232 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.

- (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. 232, 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.

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
F. One Intermediate Range Neutron Flux channel inoperable.	F.1 Reduce THERMAL POWER to < P-6.	24 hours
	<u>OR</u>	
	F.2 Increase THERMAL POWER to > P-10.	24 hours
G. Two Intermediate Range Neutron Flux channels inoperable.	G.1 Suspend operations involving positive reactivity additions.	Immediately
	<u>AND</u>	
	G.2 Reduce THERMAL POWER to < P-6.	2 hours
H. One Source Range Neutron Flux channel inoperable.	H.1 Suspend operations involving positive reactivity additions.	Immediately
I. Two Source Range Neutron Flux channels inoperable.	I.1 Open Reactor Trip Breakers (RTBs).	Immediately

(continued)



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

CONSTELLATION ENERGY GENERATION, LLC

DOCKET NO. 50-244

R. E. GINNA NUCLEAR POWER PLANT

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 154
Renewed License No. DPR-18

1. The U.S. Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Constellation Energy Generation, LLC (the licensee) dated March 24, 2022, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Renewed Facility Operating License No. DPR-18 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 154, are hereby incorporated in the renewed license. Constellation Energy Generation, LLC shall operate the facility in accordance with the Technical Specifications.

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

FOR THE NUCLEAR REGULATORY COMMISSION

Robert F. Kuntz, Acting Chief
Plant Licensing Branch III
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment:
Changes to the License and Technical
Specifications

Date of Issuance: March 1, 2023

ATTACHMENT TO LICENSE AMENDMENT NO. 154

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

REMOVE

INSERT

License No. DPR-18
Page 4

License No. DPR-18
Page 4

TSs
3.3.1 – 2
3.3.1 – 3

TSs
3.3.1 – 2
3.3.1 – 3

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 154, 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.

CONDITION	REQUIRED ACTION	COMPLETION TIME
	C.3 Place Control Rod Drive System in a condition incapable of rod withdrawal.	7 hours
D. As required by Required Action A.1 and referenced by Table 3.3.1-1.	D.1 ----- - NOTE - 1. For Functions 2a, 2b, 5, 6, 7b, 8, and 13, one channel may be bypassed for up to 12 hours for surveillance testing. 2. The inoperable channel may be bypassed for up to 12 hours for surveillance testing of other channels. ----- Place channel in trip.	72 hours <u>OR</u> -----NOTE----- Not applicable if there is a loss of function. ----- In accordance with the Risk Informed Completion Time Program
E. As required by Required Action A.1 and referenced by Table 3.3.1-1.	E.1 Reduce THERMAL POWER to < 5E-11 amps. <u>OR</u>	24 hours

CONDITION	REQUIRED ACTION	COMPLETION TIME
	<p>E.2</p> <p>----- - NOTE - Required Action E.2 is not applicable when:</p> <p>a. Two channels are inoperable, or</p> <p>b. THERMAL POWER is < 5E-11 amps.</p> <p>-----</p> <p>Increase THERMAL POWER to \geq 8% RTP.</p>	<p>24 hours</p>
<p>F. As required by Required Action A.1 and referenced by Table 3.3.1-1.</p>	<p>F.1 Open RTBs and RTBBs upon discovery of two inoperable channels.</p> <p><u>AND</u></p> <p>F.2</p> <p>----- - NOTE - Limited plant cooldown or boron dilution is allowed provided the change is accounted for in the calculated SDM.</p> <p>-----</p> <p>Suspend operations involving positive reactivity additions.</p> <p><u>AND</u></p> <p>F.3 Restore channel to OPERABLE status.</p>	<p>Immediately upon discovery of two inoperable channels</p> <p>Immediately</p> <p>48 hours</p>



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 231 TO RENEWED FACILITY OPERATING
LICENSE NO. NPF-72, AMENDMENT NO. 231 TO RENEWED FACILITY
OPERATING LICENSE NO. NPF-77, AMENDMENT NO. 232 TO RENEWED
FACILITY OPERATING LICENSE NO. NPF-37, AMENDMENT NO. 232 TO
RENEWED FACILITY OPERATING LICENSE NO. NPF-66, AND AMENDMENT 154 TO
RENEWED FACILITY OPERATING LICENE NO. NPF-18
CONSTELLATION ENERGY GENERATION, LLC
BRAIDWOOD STATION, UNITS 1 AND 2, BYRON STATION, UNIT NOS. 1 AND 2,
AND R. E GINNA NUCLEAR POWER STATION
DOCKET NOS. STN 50-456, STN 50-457, STN 50-454, STN 50-455, AND 50-244

1.0 INTRODUCTION

By letter to the U.S. Nuclear Regulatory Commission (NRC, the Commission) dated March 24, 2022 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML22083A224), Constellation Energy Generation, LLC (the licensee), requested changes to the technical specifications (TSs) and renewed facility operating licenses for the Braidwood Station, Units 1 and 2 (Braidwood), Byron Station, Unit Nos. 1 and 2 (Byron), and R. E. Ginna Nuclear Power Plant (Ginna).

The proposed changes are consistent with NRC-approved Technical Specifications Task Force (TSTF) Traveler 246 (TSTF-246), Revision 0, "RTS [reactor trip system] Instrumentation, 3.3.1 Condition F Completion Time [CT]," dated February 20, 1998 (ML040611027), which revises the CT of the limiting condition for operation (LCO) TS 3.3.1, Condition F, from 2 hours to 24 hours. The NRC staff issued a final safety evaluation (SE) approving TSTF-246, Revision 0, on March 22, 1999 (ML20204E965).

2.0 REGULATORY EVALUATION

Title 10 of the *Code of Federal Regulations* (10 CFR) 50.36(c)(2), states, in part: LCOs. (i) LCOs are the lowest functional capability or performance levels of equipment required for safe operation of the facility.

When a LCO of a nuclear reactor is not met, the licensee shall shut down the reactor or follow any remedial action permitted by the TSs until the condition can be met.

The NRC staff's guidance for the review of TSs is in Chapter 16.0, "Technical Specifications," of NUREG-0800, Revision 3, "Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants: LWR [light-water reactor] Edition" (SRP), March 2010 (ML100351425). As described therein, as part of the regulatory standardization effort, the NRC staff has prepared Standard Technical Specifications (STs) for each of the LWR nuclear designs. Accordingly, the NRC staff's review includes consideration of whether the proposed changes here are consistent with Revision 5.0 of NUREG-1431 "Standard Technical Specifications, Westinghouse Plants," Volume 1, "Specifications," and Volume 2, "Bases," September 2021 (ML21259A155 and ML21258A424, respectively) as modified by NRC-approved travelers.

2.1 Variations

TSTF-246 was developed using the previous version of the STs, NUREG-0452, Revision 5, which was a draft based on the Comanche Peak original TSs. The Braidwood, Byron, and Ginna, TSs are based on the NUREG-1431, Volume 1, Revision 5, and, therefore, the wording for Condition F varies from the wording approved in the traveler for Braidwood, Byron, and Ginna.

TSTF-246, TS 3.3.1, Condition F, states:

THERMAL POWER > P-6 and < P-10, one Intermediate Range Neutron Flux Channel

Braidwood and Byron, TS 3.3.1, Condition F, states:

One Intermediate Range Neutron Flux channel inoperable

The Ginna TSs differ from the standard NUREG-1431, Standard Technical Specifications, wording as follows:

The Condition for Intermediate Range Neutron Flux channel inoperable is Condition E and states "As required by Required Action A.1. and referenced by Table 3.3.1-1".

Required Action E.1 states "Reduce THERMAL POWER to <5E-11 amps"; which, is the equivalent to the P-6 permissive used in TSTF-246.

Required Action E.1 states "Increase THERMAL POWER to >8% RTP"; which, is the equivalent to the P-10 permissive used in TSTF-246.

Required Action E.2 is modified by a Note which states that the option to increase THERMAL POWER is not allowed if both intermediate range channels are inoperable or if THERMAL POWER is < 5E-11 amps. This prevents the plant from increasing THERMAL POWER when the trip capability of the Intermediate Range Neutron Flux trip Function is not available.

Ginna does not have an equivalent Condition G for two Intermediate Range channels inoperable.

3.0 TECHNICAL EVALUATION

The licensee proposed the extension of the CT for TS 3.3.1, Required Action F.1, and Required Action F.2, for Byron and Braidwood, Required Actions E.1 and E.2, for Ginna, from 2 hours to 24 hours when thermal power is greater than P-6 and less than P-10 with one Intermediate Range Neutron Flux channel inoperable.

The licensee's proposal is consistent with TSTF-246 which allows an increase in this CT from 2 hours to 24 hours. The licensee has provided the following basis for this proposed change:

This proposed change is acceptable for the following reasons: (a) adequate protection is still provided by the remaining intermediate range (IR) channel and the power range (PR) channels, (b) if the second IR channel is not available, Condition G would require no positive reactivity additions and reduction of power to below P-6 within 2 hours, and (c) the PR low setpoint is the safety analysis credited protection for power excursions between P-6 and P-10. If a PR low setpoint channel is not available, Condition E would require that channel to be placed in trip within 72 hours (or be in MODE 3 within 6 hours) thus fulfilling the safety function for that PR channel. Furthermore, with one PR low setpoint channel inoperable the requirement to be in MODE 3 within 6 hours is less restrictive than the TS requirement to increase power to above P- 10 in 2 hours.

In addition, a 2-hour CT is impractical for increasing power above P-10 depending on plant conditions at the time one channel was determined inoperable. (For example, a main feed pump (MFP) may be required to be in operation for reactor power to approach and increase above P-10, which in turn requires completion of MFP testing prior to it being placed in service.)

The NRC staff finds the licensee's basis to be consistent with the staff's basis for approval of TSTF-246. With the remaining IR and PR channels OPERABLE, the proposed 24-hour time limit for TS 3.3.1, Condition F, is a reasonable time frame for accomplishing the required actions (i.e., slow and controlled power adjustment either above P-10 or below P-6). Accordingly, the NRC staff finds that TSTF-246 is applicable to Braidwood, Byron, and Ginna, and that the proposed change is acceptable.

The NRC staff reviewed the proposed administrative variations in Section 2.1 of this SE. The wording for Condition F varies from the approved traveler for Braidwood, Byron, and Ginna. The NRC staff reviewed these wording changes and determined that they are administrative in nature and continue to meet the intent of TSTF-246.

The current Ginna TS wording differs from the standard NUREG-1431, STS. The NRC staff reviewed the wording differences listed in Section 2.1 of this SE and determined that the Ginna TS are acceptable because the CT change made pursuant to TSTF-246, is made to the equivalent action statements as discussed in Section 2.1 of this SE.

4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Illinois and New York State officials were notified of the proposed issuance of the amendments on December 29, 2022. Both State officials had no comments.

5.0 ENVIRONMENTAL CONSIDERATION

The amendments change a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR, part 20. The NRC staff has determined that the amendments involve no significant change in the types or significant increase in the amounts of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendments involve no significant hazards consideration, and there has been no public comment on such finding published in the *Federal Register* on May 17, 2022 (87 FR 29886). Accordingly, the amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendments.

6.0 CONCLUSION

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

Principal Contributor: T Sweat

Date of Issuance: March 1, 2023

SUBJECT: BRAIDWOOD STATION, UNITS 1 AND 2, BYRON STATION, UNIT NOS. 1 AND 2, AND R. E. GINNA NUCLEAR POWER PLANT- ISSUANCE OF AMENDMENTS NOS. 231 AND 231, 232 AND 232, AND 154 REGARDING ADOPTION OF TSTF-246 (EPID L-2022-LLA-0043) DATED MARCH 1, 2023

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