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

January 18, 2022

Mr. Steven Snider
Vice President – Nuclear Engineering
Nuclear Corporate
Duke Energy Corporation
526 South Church Street, EC-07H
Charlotte, NC 28202

SUBJECT: SHEARON HARRIS NUCLEAR POWER PLANT, UNIT 1 - CORRECTION TO AMENDMENT TO REVISE THE TECHNICAL SPECIFICATION FOR ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION (EPID L-2020-LLA-0262)

Dear Mr. Snider:

On October 7, 2021 (Agencywide Documents Access and Management System Accession No. ML21224A101), the U.S. Nuclear Regulatory Commission (NRC) issued, in part, Amendment No. 186 to Renewed Facility Operating License No. NPF-63 for the Shearon Harris Nuclear Power Plant, Unit 1. Subsequent to issuance of the amendment, an incorrect amendment number was identified. The purpose of this letter is to correct the Amendment No. from 186 to 187. Please replace the affected pages of the above letter with the enclosed.

This amendment was in response to your request dated December 3, 2020. The amendment revises the Technical Specifications for the "Engineered Safety Feature Actuation System Instrumentation" by adding a footnote to identify the enabled functions and the applicable MODES for the Reactor Trip, P-4 interlock function. The revision removes the turbine trip function of the P-4 interlock in MODE 3 from the existing TS.

The NRC concludes that the correction is editorial in nature and does not change the staff's previous conclusion in the safety evaluation for this Amendment, nor does it affect the no significant hazards consideration, as published in the *Federal Register* on March 23, 2021 (86 FR 15501).

Thank you for bringing this to our attention and we apologize for any inconvenience caused. If you have any questions, please contact me at (301) 415-8480 or by e-mail at Andrew.Hon@nrc.gov.

Sincerely,

Andrew Hon Digitally signed by Andrew Hon Date: 2022.01.18 10:58:58 -05'00'

Andrew Hon, Project Manager
Plant Licensing Branch II-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-400

Enclosure:
Corrected amendment, license and
Safety Evaluation pages

cc: Listserv

ENCLOSURE

SHEARON HARRIS NUCLEAR POWER PLANT, UNIT 1

CORRECTED AMENDMENT AND LICENSE PAGES

FOR AMENDMENT NO. 187

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

DUKE ENERGY PROGRESS, LLC

DOCKET NO. 50-400

SHEARON HARRIS NUCLEAR POWER PLANT, UNIT 1

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 187
Renewed License No. NPF-63

1. The Nuclear Regulatory Commission (the Commission) has found that:

A. The application for amendment to the Shearon Harris Nuclear Power Plant, Unit 1 (the facility), Renewed Facility Operating License No. NPF-63 by Duke Energy Progress, LLC (the licensee), dated December 3, 2020, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;

B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;

C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations set forth in 10 CFR Chapter I;

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-63 is hereby amended to read as follows:

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A and the Environmental Protection Plan contained in Appendix B, both of which are attached hereto, as revised through Amendment No. 187, are hereby incorporated into this license. Duke Energy Progress, LLC shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

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

FOR THE NUCLEAR REGULATORY COMMISSION

Original signed by David J. Wrona

David J. Wrona, Chief
Plant Licensing Branch II-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment:
Changes to Renewed Facility
Operating License and
Technical Specifications

Date of Issuance: October 7, 2021

ATTACHMENT TO LICENSE AMENDMENT NO. 187

SHEARON HARRIS NUCLEAR POWER PLANT, UNIT 1

RENEWED FACILITY OPERATING LICENSE NO. NPF-63

DOCKET NO. 50-400

Replace the following page of the Renewed Facility Operating License with the revised page. The revised page is identified by amendment number and contains a line in the margin indicating the area of change.

Remove Pages	Insert Pages
NPF-63, Page 4	NPF-63, Page 4

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

Remove Pages	Insert Pages
3/4 3-25	3/4 3-25
3/4 3-26	3/4 3-26
3/4 3-27	3/4 3/27
3/4 3-27a	3/4 3/27a
3/4 3-48	3/4 3-48
3/4 3-49	3/4 3-49

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

Duke Energy Progress, LLC, is authorized to operate the facility at reactor Core power levels not in excess of 2948 megawatts thermal (100 percent rated core 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. 187, are hereby incorporated into this license. Duke Energy Progress, LLC shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

(3) Antitrust Conditions

Duke Energy Progress, LLC. shall comply with the antitrust conditions delineated in Appendix C to this license.

(4) Initial Startup Test Program (Section 14)[1]

Any changes to the Initial Test Program described in Section 14 of the FSAR made in accordance with the provisions of 10 CFR 50.59 shall be reported in accordance with 50.59(b) within one month of such change.

(5) Steam Generator Tube Rupture (Section 15.6.3)

Prior to startup following the first refueling outage, Carolina Power & Light Company* shall submit for NRC review and receive approval if a steam generator tube rupture analysis, including the assumed operator actions, which demonstrates that the consequences of the design basis steam generator tube rupture event for the Shearon Harris Nuclear Power Plant are less than the acceptance criteria specified in the Standard Review Plan, NUREG-0800, at 15.6.3 Subparts II (1) and (2) for calculated doses from radiological releases. In preparing their analysis Carolina Power & Light Company* will not assume that operators will complete corrective actions within the first thirty minutes after a steam generator tube rupture.

[1]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.

* On April 29, 2013, the name of “Carolina Power & Light Company” (CP&L) was changed to “Duke Energy Progress, Inc.” On August 1, 2015, the name “Duke Energy Progress, Inc.” was changed to “Duke Energy Progress, LLC.”

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
8. Containment Spray Switch-over to Containment Sump (Continued)					
b. RWST--Low Low	See Item 7.b. above for all RWST--Low Low initiating functions and requirements.				
Coincident With Containment Spray	See Item 2 above for all Containment Spray initiating functions and requirements.				
9. Loss-of-Offsite Power					
a. 6.9 kV Emergency Bus--Undervoltage Primary	3/bus	2/bus	2/bus	1, 2, 3, 4	15a
b. 6.9 kV Emergency Bus--Undervoltage Secondary	3/bus	2/bus	2/bus	1, 2, 3, 4	15a
10. Engineered Safety Features Actuation System Interlocks					
a. Pressurizer Pressure,					
P-11	3	2	2	1, 2, 3	20
Not P-11	3	2	2	1, 2, 3	20
b. Low-Low T_{avg}, P-12	3	2	2	1, 2, 3	20
c. Reactor Trip, P-4	2	2	2	1, 2, 3 ##	22
d. Steam Generator Water Level, P-14	See Item 5.b. above for all P-14 initiating functions and requirements.				

TABLE 3.3-3 (Continued)

TABLE NOTATIONS

#Trip function may be blocked in this MODE below the P-11 (Pressurizer Pressure Interlock) Setpoint.

**During CORE ALTERATIONS or movement of irradiated fuel in containment, refer to Specification 3.9.9.

***Trip function automatically blocked above P-11 and may be blocked below P-11 when Safety Injection on low steam line pressure is not blocked.

##The functions of the Reactor Trip, P-4 interlock required to meet the LCO are:

- Trip the main turbine – MODES 1 and 2
- Isolate Main Feedwater with coincident low T_{avg} – MODES 1, 2, and 3
- Prevent reactuation of Safety Injection after a manual reset of Safety Injection – MODES 1, 2, and 3
- Prevent opening of Main Feedwater valves if closed on Safety Injection or Steam Generator Water Level – High High – MODES 1, 2, and 3

ACTION STATEMENTS

ACTION 14 - With the number of OPERABLE channels one less than the Minimum Channels OPERABLE requirement, restore the inoperable channel to OPERABLE status within 6 hours or in accordance with the Risk-Informed Completion Time Program or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours; however, one channel may be bypassed for up to 4 hours for surveillance testing per Specification 4.3.2.1, provided the other channel is OPERABLE.

ACTION 15 - With the number of OPERABLE channels one less than the Total Number of Channels, operation may proceed until performance of the next required CHANNEL OPERATIONAL TEST provided the inoperable channel is placed in the tripped condition within 1 hour.

ACTION 15a - With the number of OPERABLE channels one less than the Total Number of Channels, operation may proceed provided the inoperable channel is placed in the tripped condition within 1 hour. With less than the minimum channels OPERABLE, operation may proceed provided the minimum number of channels is restored within one hour, otherwise declare the affected diesel generator inoperable. When performing surveillance testing of either primary or secondary undervoltage relays, the redundant emergency bus and associated primary and secondary relays shall be OPERABLE.

ACTION 16 - With the number of OPERABLE channels one less than the Total Number of Channels, operation may proceed provided the inoperable channel is placed in the bypassed condition within 6 hours and the Minimum Channels OPERABLE requirement is met. One additional channel may be bypassed for up to 4 hours for surveillance testing per Specification 4.3.2.1.

TABLE 3.3-3 (Continued)

ACTION STATEMENTS (Continued)

ACTION 17 - With less than the Minimum Channels OPERABLE requirement, operation may continue provided the Containment Purge Makeup and Exhaust Isolation valves are maintained closed while in MODES 1, 2, 3 and 4 (refer to Specification 3.6.1.7). For MODE 6, refer to Specification 3.9.4.

ACTION 18 - With the number of OPERABLE channels one less than the Minimum Channels OPERABLE requirement, restore the inoperable channel to OPERABLE status within 48 hours or in accordance with the Risk-Informed Completion Time Program or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

ACTION 19 - With the number of OPERABLE channels one less than the Total Number of Channels, operation may proceed provided the following conditions are satisfied:

a. The inoperable channel is placed in the tripped condition within 6 hours or in accordance with the Risk-Informed Completion Time Program, and

b. The Minimum Channels OPERABLE requirement is met; however, the inoperable channel may be bypassed for up to 4 hours for surveillance testing of other channels per Specification 4.3.2.1.

ACTION 20 - With less than the Minimum Number of Channels OPERABLE, within 1 hour determine by observation of the associated permissive annunciator window(s) that the interlock is in its required state for the existing plant condition, or apply Specification 3.0.3.

ACTION 21 - With the number of OPERABLE channels one less than the Minimum Channels OPERABLE requirement, restore the inoperable channel to OPERABLE status within 6 hours or in accordance with the Risk-Informed Completion Time Program or be in at least HOT STANDBY within the next 6 hours and in at least HOT SHUTDOWN within the following 6 hours; however, one channel may be bypassed for up to 4 hours for surveillance testing per Specification 4.3.2.1 provided the other channel is OPERABLE.

ACTION 22 - With the number of OPERABLE channels one less than the Total Number of Channels, restore the inoperable channel to OPERABLE status within 48 hours or be in at least HOT STANDBY within 6 hours and in at least HOT SHUTDOWN within the following 6 hours.

ACTION 23 - With the number of OPERABLE channels less than the Total Number of Channels, declare the associated equipment inoperable and take the appropriate ACTION required in accordance with the specific equipment specification.

ACTION 24 - With the number of OPERABLE channels one less than the Minimum Channels OPERABLE requirement, restore the inoperable channel to OPERABLE status within 6 hours or in accordance with the Risk-Informed Completion Time Program or be in at least HOT STANDBY within the next 6 hours; however, one channel may be bypassed for up to 4 hours for surveillance testing per Specification 4.3.2.1 provided the other channel is OPERABLE.

TABLE 3.3-3 (Continued)

ACTION STATEMENTS (Continued)

ACTION 25 - During CORE ALTERATIONS or movement of irradiated fuel within containment, comply with the ACTION statement of Specification 3.9.9.

ACTION 26 - With the number of OPERABLE channels one less than the Total Number of Channels, operation may proceed provided the following conditions are satisfied:

a. The inoperable channel is placed in the tripped condition within 6 hours, and

b. The Minimum Channels OPERABLE requirement is met; however, the inoperable channel may be bypassed for up to 4 hours for surveillance testing of other channels per Specification 4.3.2.1.

ACTION 27 - With the number of OPERABLE channels one less than the Total Number of Channels, restore the inoperable channel to OPERABLE status within 48 hours or in accordance with the Risk-Informed Completion Time Program or be in at least HOT STANDBY within 6 hours and in at least HOT SHUTDOWN within the following 6 hours.

TABLE 4.3-2 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION
SURVEILLANCE REQUIREMENTS

CHANNEL FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	ANALOG CHANNEL OPERATIONAL TEST	TRIP ACTUATING DEVICE OPERATIONAL TEST	ACTUATION LOGIC TEST	MASTER RELAY TEST	SLAVE RELAY TEST	MODES FOR WHICH SURVEILLANCE IS REQUIRED
10. Engineered Safety Features Actuation System Interlocks (Continued)								
c. Reactor Trip, P-4	N.A.	N.A.	N.A.	SFCP	N.A.	N.A.	N.A.	1, 2, 3 ##
d. Steam Generator Water Level, P-14	See Item 5.b., above for P-14 Surveillance Requirements.							

TABLE 4.3-2 (Continued)

TABLE NOTATION

(1) Each train shall be tested at the frequency specified in the Surveillance Frequency Control Program.

(2) The Surveillance Requirements of Specification 4.9.9 apply during CORE ALTERATIONS or movement of irradiated fuel in containment.

(3) Except for relays K601, K602, K603, K608, K610, K615, K616, K617, K622, K636, K739, K740 and K741 which shall be tested at the frequency specified in the Surveillance Frequency Control Program and during each COLD SHUTDOWN exceeding 72 hours unless they have been tested within the previous 92 days.

(4) The Steam Line Isolation-Safety Injection (Block-Reset) switches enable the Negative Steam Line Pressure Rate--High signal (item 4.e) when used below the P-11 setpoint. Verify proper operation of these switches each time they are used.

* Setpoint verification not required.

\# During CORE ALTERATIONS or movement of irradiated fuel in containment.

** Trip Function automatically blocked above P-11 and may be blocked below P-11 when safety injection or low steamline pressure is not blocked.

The functions of the Reactor Trip, P-4 interlock required to meet the LCO are:

- Trip the main turbine – MODES 1 and 2
- Isolate Main Feedwater with coincident low T_{avg} – MODES 1, 2, and 3
- Prevent reactuation of Safety Injection after a manual reset of Safety Injection – MODES 1, 2, and 3
- Prevent opening of Main Feedwater valves if closed on Safety Injection or Steam Generator Water Level – High High – MODES 1, 2, and 3

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO

AMENDMENT NOS. 310 AND 306 TO RENEWED FACILITY OPERATING

LICENSE NOS. NPF-35 AND NPF-52

AMENDMENT NO. 187 TO RENEWED FACILITY OPERATING LICENSE NO. NPF-63

AMENDMENT NOS. 320 AND 299 TO RENEWED FACILITY OPERATING

LICENSE NOS. NPF-9 AND NPF-17

DUKE ENERGY CAROLINAS, LLC AND DUKE ENERGY PROGRESS, LLC

CATAWBA NUCLEAR STATION, UNITS 1 AND 2

DOCKET NOS. 50-413 AND 50-414

SHEARON HARRIS NUCLEAR POWER PLANT, UNIT 1

DOCKET NO. 50-400

MCGUIRE NUCLEAR STATION, UNITS 1 AND 2

DOCKET NOS. 50-369 AND 50-370

1.0 INTRODUCTION

By letter dated December 3, 2020 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML20338A264), Duke Energy Carolinas, LLC, and Duke Energy Progress, LLC (Duke Energy, the licensee), submitted a license amendment request (LAR) to the U.S. Nuclear Regulatory Commission (NRC, the Commission) for amendments to the Technical Specifications (TS) for the Catawba Nuclear Station, Units 1 and 2 (CNS); McGuire Nuclear Station, Units 1 and 2 (MNS); and Shearon Harris Nuclear Power Plant, Unit 1 (HNP).

The proposed amendments would revise the TS for the “Engineered Safety Feature Actuation System Instrumentation” (ESFAS), by adding a footnote to identify the enabled functions and the applicable MODES for the Reactor Trip, P-4 interlock function. The P-4 interlock is currently required by the TS in MODES 1 (Power Operation), 2 (Startup), and 3 (Hot Standby). The proposed amendments would remove the turbine trip function of the P-4 interlock in MODE 3 from the existing TS. In addition, only for CNS, the proposed amendments would remove the steam dump function of the P-4 interlock in MODES 1, 2, and 3.

In Attachment 2 of the LAR, the licensee submitted proposed TS Bases changes that correspond to the proposed TS changes. The proposed TS Bases changes are for information only and the licensee will revise them in accordance with each Unit’s associated TS Bases Control Program (i.e., TS 5.5.14 for CNS and MNS, TS 6.8.4.n for HNP.)

SUBJECT: SHEARON HARRIS NUCLEAR POWER PLANT, UNIT 1 - CORRECTION TO AMENDMENT TO REVISE THE TECHNICAL SPECIFICATION FOR ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION (EPID L-2020-LLA-0262) DATED JANUARY 18, 2022

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