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

December 23, 2015

Mr. Richard Michael Glover
Site Vice President
H.B. Robinson Steam Electric Plant
Duke Energy Progress, Inc.
3581 West Entrance Road, RNPA01
Hartsville, SC 29550

SUBJECT: H. B. ROBINSON STEAM ELECTRIC PLANT UNIT NO. 2 – SUPPLEMENTAL INFORMATION NEEDED FOR ACCEPTANCE OF REQUESTED LICENSING ACTION RE: AMENDMENT REQUEST FOR TECHNICAL SPECIFICATION CHANGE TO REACTOR COOLANT SYSTEM PRESSURE AND TEMPERATURE LIMITS (CAC NO. MF7048)

Dear Mr. Glover:

By letter dated November 2, 2015 (Agencywide Documents Access and Management System Accession No. ML15307A069), Duke Energy Progress, Inc. (Duke Energy), submitted a license amendment request for H. B. Robinson Steam Electric Plant Unit No. 2 (HBRSEP2). The proposed amendment would revise the reactor coolant system (RCS) pressure and temperature limits by replacing Technical Specification (TS) Section 3.4.3, "RCS Pressure and Temperature (P/T) Limits," Figures 3.4.3-1 and 3.4.3-2, with figures that are applicable up to 50 effective full power years. The purpose of this letter is to provide the results of the U.S. Nuclear Regulatory Commission (NRC) staff's acceptance review of this amendment request. The acceptance review was performed to determine if there is sufficient technical information in scope and depth to allow the NRC staff to complete its detailed technical review. The acceptance review is also intended to identify whether the application has any readily apparent information insufficiencies in its characterization of the regulatory requirements or the licensing basis of the plant.

Consistent with Section 50.90 of Title 10 of the *Code of Federal Regulations* (10 CFR), "Application for amendment of license, construction permit, or early site permit," an amendment to the license (including the TSs) must fully describe the changes requested, and following as far as applicable, the form prescribed for original applications. Section 50.34 of 10 CFR, "Contents of applications: technical information," addresses the content of technical information required. This section stipulates that the submittal address the design and operating characteristics, unusual or novel design features, and principal safety considerations.

The NRC staff has reviewed your application and concluded that the information delineated in the enclosure to this letter is necessary to enable the staff to make an independent assessment regarding the acceptability of the proposed amendment in terms of regulatory requirements and the protection of public health and safety and the environment.

In order to make the application complete, the NRC staff requests that Duke Energy supplement the application to address the information requested in the enclosure by December 28, 2015. This will enable the NRC staff to begin its detailed technical review. If the information responsive to the NRC staff's request is not received by the above date, the application will not

be accepted for review pursuant to 10 CFR 2.101, "Filing of application," and the NRC will cease its review activities associated with the application. If the application is subsequently accepted for review, you will be advised of any further information needed to support the staff's detailed technical review by separate correspondence.

The information requested and associated time frame in this letter were discussed with Scott Connelly of your staff on December 15, 2015.

If you have any questions, please contact the HBRSEP2 Project Manager, Martha Barillas, at (301) 415-2760 or by e-mail at Martha.Barillas@nrc.gov.

Sincerely,

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

Docket No. 50-261

Enclosure:
As stated

cc w/encl: Distribution via Listserv

SUPPLEMENTAL INFORMATION NEEDED

LICENSE AMENDMENT REQUEST FOR TECHNICAL SPECIFICATION CHANGE

TO REACTOR COOLANT SYSTEM PRESSURE AND TEMPERATURE LIMITS

DUKE ENERGY PROGRESS, INC.

H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2

DOCKET NO. 50-261

By letter dated November 2, 2015 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML15307A069), Duke Energy Progress, Inc. (Duke Energy), submitted a license amendment request for H. B. Robinson Steam Electric Plant Unit No. 2. The proposed amendment would revise the reactor coolant system (RCS) pressure and temperature limits by replacing Technical Specification (TS) Section 3.4.3, "RCS Pressure and Temperature (P/T) Limits," Figures 3.4.3-1 and 3.4.3-2, with figures that are applicable up to 50 effective full-power years.

The U.S. Nuclear Regulatory Commission (NRC) staff has reviewed your application and concluded that the following information is necessary to enable the staff to make an independent assessment regarding the acceptability of the proposed amendment in terms of regulatory requirements and the protection of public health and safety and the environment.

The amendment submitted relies on the analysis provided in WCAP-15805 (ADAMS Accession Nos. ML021190313 and ML021190357). The analysis described in WCAP-15805 relies upon the use of the FERRET code, which is described in WCAP-16803 (ADAMS Accession No. ML061600256). However, implementation of the previously approved method described in WCAP-16083, as part of the submitted license amendment request, is not consistent with the WCAP-16083 methodology limitation described in the corresponding NRC staff safety evaluation. Consequently, the conclusion on page 6-11 of WCAP-15805 which states: "The data comparisons provided in Tables 6-9 and 6-10 show that the adjustments to the calculated spectra are relatively small and well within the assigned uncertainties for the calculated spectra, measured sensor reaction rates, and dosimetry reaction cross-sections," were found to be unjustified. Additionally, the NRC staff's acceptance review has identified a potential undiscussed bias, which may require bias correction as described in Regulatory Guide (RG) 1.190, Calculational and Dosimetry Methods for Determining Pressure Vessel Neutron Fluence" (ADAMS Accession No. ML010890301), Section 1.4.3, "Estimate of Fluence Calculational Bias and Uncertainty." Consequently, the NRC staff requests that the following issues be addressed in a license amendment request supplement:

1. Considering the calculated-to-measured (C/M) data shows consistent under prediction of neutron fluence calculations when compared to measurements, provide an explanation for why the neutron fluence calculations are under predicting fluence, and if the methodology of WCAP-16083 is found to be inappropriate, as implemented, as was determined by the NRC staff, then (1) revise the neutron fluence calculational

methodology accordingly and/or (2) consider correcting neutron fluence calculations using the guidance in RG 1.190 if correction is found to be appropriate.

2. The NRC staff noted that the unadjusted C/M summary table provided in Table 6-11 of WCAP-15805 excludes all cobalt dosimeter data and the report does not explain why. Explain why it is acceptable to remove this data.

be accepted for review pursuant to 10 CFR 2.101, "Filing of application," and the NRC will cease its review activities associated with the application. If the application is subsequently accepted for review, you will be advised of any further information needed to support the staff's detailed technical review by separate correspondence.

The information requested and associated time frame in this letter were discussed with Scott Connelly of your staff on December 15, 2015.

If you have any questions, please contact the HBRSEP2 Project Manager, Martha Barillas, at (301) 415-2760 or by e-mail at Martha.Barillas@nrc.gov.

Sincerely,

/RA CPfefferkorn for/

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

Docket No. 50-261

Enclosure:
As stated

cc w/encl: Distribution via Listserv

DISTRIBUTION:
PUBLIC
Branch Reading File
RidsACRS_MailCTR
RidsNrrDssSrxb
RidsNrrDorl
RidsNrrDorlLpl2-2
RidsNrrLABClayton
RidsNrrPMRobinson
RidsRgn2MailCenter Resource

ADAMS Accession No. ML15343A065

OFFICE	NRR/DORL/LPLII-2/PM	NRR/DORL/LPLII-2/LA	NRR/DSS/SRXB/BC
NAME	(*CPfefferkorn for*) MBarillas	BClayton	CJackson
DATE	12/15/2015	12/15/2015	12/17/2015
OFFICE	NRR/DORL/LPLII-2/BC	NRR/DORL/LPLII-2/PM	
NAME	BBeasley	(*CPfefferkorn for*) MBarillas	
DATE	12/22/2015	12/23/2015	

OFFICIAL RECORD COPY