



David S. Hoffman  
H. B. Robinson Steam  
Electric Plant Unit 2  
Director – Nuclear Organization  
Effectiveness

Duke Energy Progress  
3581 West Entrance Road  
Hartsville, SC 29550

O 843 857 5239  
F 843 857 5890

David.Hoffman@duke-energy.com

Serial: RNP-RA/16-0022

APR 21 2016

10 CFR 50.59(d)(2)

Attn: Document Control Desk  
United States Nuclear Regulatory Commission  
Washington, DC 20555-0001

H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2  
DOCKET NO. 50-261/RENEWED LICENSE NO. DPR-23

REPORT OF CHANGES PURSUANT TO 10 CFR 50.59

Ladies and Gentlemen:

Duke Energy Progress, Inc., hereby submits the attached report in accordance with 10 CFR 50.59(d)(2), "Changes, Tests, and Experiments," for H. B. Robinson Steam Electric Plant, Unit No. 2 (HBRSEP2). The report provides a description of changes that were implemented pursuant to 10 CFR 50.59 between April 1, 2014, and April 1, 2016. A summary of the evaluation for each item is also included in the attached report. Should you have any questions regarding this matter, please contact Mr. Scott Connelly, Acting Manager, Nuclear Regulatory Affairs at (843) 857-1569.

This document contains no new Regulatory Commitments.

Sincerely,

David S. Hoffman  
Director – Nuclear Organization Effectiveness

DSH/jmw

Attachment

c: Administrator, NRC, Region II  
Dennis Galvin, NRC, NRR  
NRC Resident Inspector, HBRSEP2

United States Nuclear Regulatory Commission  
Attachment to Serial: RNP-RA/16-0022  
2 Pages (including this cover page)

**SUMMARY OF CHANGES, TESTS, AND EXPERIMENTS FOR THE  
H. B. ROBINSON STEAM ELECTRIC PLANT (HBRSEP), UNIT NO. 2**

Evaluations performed for changes made in accordance with 10 CFR 50.59 during the time period of April 1, 2014, to April 1, 2016:

Evaluation No. 1945387: Internal Flooding Design Basis Reconstitution

EC 282101 analyzes postulated internal flooding effects as a result of high energy line and fire line breaks in the RNP Reactor Auxiliary Building (RAB). Methods of evaluation used in supporting UFSAR analyses that demonstrate intended design functions will be accomplished under environmental conditions, such as submergence from pipe break, are subject to evaluation per criterion of 10 CFR 50.59(c)(2)(viii). EC 282101 makes changes to the methods of evaluation for line breaks as described within references of the UFSAR. As such this is considered a change in the UFSAR described evaluation methodologies; however, it has been concluded that the changes proposed for this activity do not meet any of the criteria in paragraph (c)(2) of 10CFR50.59, and prior NRC approval is not required to implement this activity.

Evaluation No. 692139: Westinghouse Safe Shutdown Seal Redesign

While the Safety Evaluation Screen does not directly conclude that a UFSAR-described design function is adversely impacted by the proposed activity, a trip resulting from a seal leak-off alarm could ultimately result in a loss of forced core cooling flow from that RCP. Such an event would adversely impact the RCP's core cooling design function. Thus, this impact is considered adverse and the 10 CFR 50.59 Evaluation will be used to determine if a malfunction of the Westinghouse Gen III SHIELD® Shutdown Seal (SDS) could more than minimally increase the likelihood that an RCP would be tripped.

It is concluded that the proposed activity described in Section 1.0 may be implemented at Robinson without requiring Duke Energy to request a License Amendment. The Robinson UFSAR was reviewed and Sections: 3.1.2.6; 3.5.1.1; 5.2.5.3.1.2; 5.2.5.3.3.2; and 5.4.1.1 were annotated with suggested changes. The Robinson Technical Specifications (TS) were reviewed, including: 1.1; 3.3.2; 3.4.13; 3.4.15; 3.4.17; 3.6.8 and their associated TS Bases. Implementation of the SDS does not necessitate changes to the TS or TS Bases.

Evaluation No. 729915: Cycle 30 Core Design/UFSAR Chapter 15 Re-analysis

A number of UFSAR Chapter 15 events were re-examined by AREVA due to the change to the core design. In particular, Cycle 30 specific MDNBR and FCM results were generated for Chapter 15 accidents. This reanalysis also noted the number of fuel failures predicted for Condition III and IV accidents did not change. As discussed above, the number of fuel failures is bounded by the number of failures assumed in the AST dose analysis. Thus, the AST dose analysis remains bounding and there is no change to the predicted dose due to any UFSAR Chapter 15 accident. These Cycle specific results show that all acceptance criteria continue to be met, as described above. However, some results had less margin to the limit than in Cycle 29.

As described in the above discussion of the acceptability of the analysis results, implementation of the Cycle 30 core design and supporting safety analyses demonstrated that the requirements and acceptance criteria defined in the UFSAR are satisfied for Cycle 30 operation. Therefore, the Cycle 30 reload design, with regard to the safety analysis, will continue to meet the plant licensing basis.