



MAR 03 2005

Serial: RNP-RA/05-0006

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

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

REQUEST FOR TECHNICAL SPECIFICATIONS CHANGE
TO CORE OPERATING LIMITS REPORT (COLR) REFERENCES

Ladies and Gentlemen:

In accordance with the provisions of the Code of Federal Regulations, Title 10, Part 50.90, Progress Energy Carolinas (PEC), Inc., also known as Carolina Power and Light Company, is submitting a request for an amendment to the Technical Specifications (TS) contained in Appendix A of the Operating License for H. B. Robinson Steam Electric Plant (HBRSEP), Unit No. 2. The proposed amendment would modify the requirements of TS 5.6.5, "Core Operating Limits Report (COLR)."

Specifically, the proposed change would add topical report EMF-2103(P)(A), "Realistic Large Break LOCA Methodology for Pressurized Water Reactors," to the list of documents specified in TS 5.6.5, "Core Operating Limits Report (COLR)." TS 5.6.5 lists the approved methodologies that can be used to determine the core operating limits.

The NRC approved EMF-2103(P)(A) in a letter dated April 9, 2003. In that letter, the NRC specified a number of limitations and conditions that must be met in order to use the subject topical report. One condition requires the submittal of a plant-specific analysis. The plant-specific analysis for HBRSEP, Unit No. 2, is provided in Attachments V and VI. Attachment V provides a non-proprietary version of the analysis EMF-3030(NP), "Robinson Nuclear Plant Realistic Large Break LOCA Analysis," February 2004, that can be released for public disclosure. Attachment VI provides a proprietary version of the analysis EMF-3030(P), "Robinson Nuclear Plant Realistic Large Break LOCA Analysis," February 2004, that should be withheld from public disclosure. Attachment VII provides an Affidavit from Framatome ANP regarding the proprietary nature of Attachment VI, as required by 10 CFR 2.390.

Progress Energy Carolinas, Inc.
Robinson Nuclear Plant
3581 West Entrance Road
Hartsville, SC 29550

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Attachment I provides an Affirmation pursuant to 10 CFR 50.30(b).

Attachment II provides a description of the proposed change, a technical justification for the proposed change, a No Significant Hazards Determination, and an Environmental Impact Consideration.

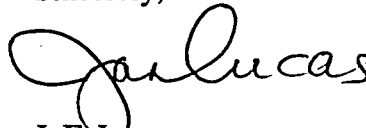
Attachment III provides a markup of the current TS page and Attachment IV provides a retyped page for the proposed TS.

In accordance with 10 CFR 50.91(b), PEC is providing the State of South Carolina with a copy of the proposed license amendment.

PEC requests approval of the proposed license amendment by November 18, 2005 to allow for the use of the specified topical report in the evaluation of the subsequent core reload.

If you have any questions concerning this matter, please contact Mr. C. T. Baucom at (843) 857-1253.

Sincerely,



J. F. Lucas

Manager - Support Services - Nuclear

RAC/rac

Attachments

- I. Affirmation
 - II. Request for Technical Specifications Change Regarding Revision to Core Operating Limits Report (COLR) References
 - III. Markup of Current Technical Specifications Page
 - IV. Retyped Technical Specifications Page
 - V. EMF-3030(NP), "Robinson Nuclear Plant Realistic Large Break LOCA Analysis," February 2004, Non-Proprietary Version
 - VI. EMF-3030(P), "Robinson Nuclear Plant Realistic Large Break LOCA Analysis," February 2004, Proprietary Version
 - VII. Framatome ANP Affidavit Regarding Proprietary Attachment VI
- c: Mr. T. P. O'Kelley, Director, Bureau of Radiological Health (SC)
Mr. H. J. Porter, Director, Division of Radioactive Waste Management (SC)
Dr. W. D. Travers, NRC, Region II
Mr. C. P. Patel, NRC, NRR
NRC Resident Inspectors, HBRSEP
Attorney General (SC)

AFFIRMATION

The information contained in letter RNP-RA/05-0006 is true and correct to the best of my information, knowledge, and belief; and the sources of my information are officers, employees, contractors, and agents of Progress Energy Carolinas, Inc., also known as Carolina Power and Light Company. I declare under penalty of perjury that the foregoing is true and correct.

Executed On: 2 March 2005



J. W. Moyer
Vice President, HBRSEP, Unit No. 2

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

REQUEST FOR TECHNICAL SPECIFICATIONS CHANGE REGARDING REVISION TO CORE OPERATING LIMITS REPORT (COLR) REFERENCES

Description of the Proposed Change

H. B. Robinson Steam Electric Plant (HBRSEP), Unit No. 2, Technical Specifications (TS) 5.6.5 contains a list of documents that describe the analytical methods that may be used to determine the core operating limits. TS 5.6.5 also states that these methods shall be those previously reviewed and approved by the NRC and that the approved version shall be identified in the COLR. Progress Energy Carolinas (PEC), Inc., also known as Carolina Power and Light Company, is proposing a change that would add topical report EMF-2103(P)(A), "Realistic Large Break LOCA Methodology for Pressurized Water Reactors," to the list of documents in TS 5.6.5. There is no intent to delete the Large Break LOCA analysis references that are currently listed in TS 5.6.5.

Technical Justification for the Proposed Change

EMF-2103(P)(A), "Realistic Large Break LOCA Methodology for Pressurized Water Reactors," has been approved by the NRC as an acceptable methodology. PEC has reviewed this methodology and found it to be appropriate for use on HBRSEP, Unit No. 2.

In the NRC's Safety Evaluation Report (SER), dated April 9, 2003, the NRC specified a number of limitations and conditions that must be met in order to use the subject topical report. One condition requires the submittal of a plant-specific analysis. The plant-specific analysis for HBRSEP, Unit No. 2, is described in Framatome ANP, Inc., Report EMF-3030(P), "Robinson Nuclear Plant Realistic Large Break LOCA Analysis," dated February 2004. Report EMF-3030(P) is provided in Attachment VI to this letter. Table 3.4 of EMF-3030(P) provides a discussion of each of the NRC listed conditions and limitations and demonstrates that HBRSEP, Unit No. 2, meets these conditions and limitations. The Large Break LOCA analysis results, as shown in EMF-3030(P), demonstrate that the applicable acceptance criteria are met when using the EMF-2103(P)(A) methodology. Note that the EMF-3030(P) result of 0.68 pounds of total hydrogen generated corresponds to 0.0004 times the maximum hypothetical amount that could be produced if 100% of the clad metal surrounding the fuel reacted, and therefore meets the acceptance criterion of 0.01 times the maximum amount.

One of the limitations specified in the NRC SER states, "The model does not determine whether Criterion 5 of 10 CFR 50.46, long term cooling, has been satisfied. This will be determined by each applicant or licensee as part of its application of this methodology." Attachment VI does not evaluate long term cooling. For HBRSEP, Unit No. 2, this was evaluated previously in report EMF-2286, "H. B. Robinson Unit 2 Extended Transfer to Cold Leg Recirculation Following a LBLOCA," and was approved by the NRC in a letter dated July 12, 2001.

Therefore, the requirements of 10 CFR 50.46 can be met by use of any of the previously accepted methods and by the use of EMF-2103(P)(A).

No Significant Hazards Consideration Determination

Progress Energy Carolinas (PEC), Inc., also known as Carolina Power and Light Company, is proposing a change to the Appendix A, Technical Specifications (TS), of Facility Operating License No. DPR-23, for H. B. Robinson Steam Electric Plant (HBRSEP), Unit No. 2. This change will revise the requirements of TS 5.6.5, "Core Operating Limits Report (COLR)," to provide an additional analytical methodology to be used to determine acceptable core designs and provide inputs to develop the core operating limits contained in the COLR.

An evaluation of the proposed change has been performed in accordance with 10 CFR 50.91(a)(1) regarding no significant hazards considerations using the standards in 10 CFR 50.92(c). A discussion of these standards as they relate to this amendment request follows:

1. **The Proposed Change Does Not Involve a Significant Increase in the Probability or Consequences of an Accident Previously Evaluated**

The proposed methodology will be reviewed and approved by the NRC prior to its use for HBRSEP, Unit No. 2. Analyzed events are assumed to be initiated by the failure of plant structures, systems, or components. The determination of core operating limits in accordance with this new methodology will meet the limitations specified in the NRC safety evaluation of the new methodology. The topical report associated with the new methodology demonstrates that the integrity of the fuel will be maintained and that design requirements will continue to be met. The proposed change does not involve physical changes to any plant structure, system, or component. Therefore, the probability of occurrence for a previously analyzed accident is not significantly increased.

The consequences of a previously analyzed accident are dependent on the initial conditions assumed for the analysis, the behavior of the fuel during the analyzed accident, the availability and successful functioning of the equipment assumed to operate in response to the analyzed event, and the setpoints at which these actions are initiated. The proposed methodology continues to meet applicable design and safety analyses acceptance criteria. The proposed change does not affect the performance of any equipment used to mitigate the consequences of an analyzed accident. As a result, no analysis assumptions are violated and there are no adverse effects on the factors that contribute to offsite or onsite dose as the result of an accident. The proposed change does not affect setpoints that initiate protective or mitigative actions. The proposed change ensures that plant structures, systems, or components are maintained consistent with the safety analysis and licensing bases. Based on this evaluation, there is no significant increase in the consequences of a previously analyzed event.

Therefore, this change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. The Proposed Change Does Not Create the Possibility of a New or Different Kind of Accident From Any Previously Evaluated

The proposed change does not involve any physical alteration of plant systems, structures, or components, other than allowing for fuel design in accordance with NRC approved methodologies. The proposed methodology continues to meet applicable criteria for Large Break Loss of Coolant Accident (LBLOCA) analysis. No new or different equipment is being installed. No installed equipment is being operated in a different manner. There is no alteration to the parameters within which the plant is normally operated or in the setpoints that initiate protective or mitigative actions. As a result, no new failure modes are being introduced. There are no changes in the methods governing normal plant operation, nor are the methods utilized to respond to plant transients altered. Therefore, the proposed change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. The Proposed Change Does Not Involve a Significant Reduction in the Margin of Safety

The margin of safety is established through the design of the plant structures, systems, and components, through the parameters within which the plant is operated, through the establishment of the setpoints for the actuation of equipment relied upon to respond to an event, and through margins contained within the safety analyses. The proposed change in the methodology used for LBLOCA analyses does not impact the condition or performance of structures, systems, setpoints, and components relied upon for accident mitigation. The proposed change does not significantly impact any safety analysis assumptions or results. Therefore, the proposed change does not result in a significant reduction in the margin of safety.

Based on the above discussion, PEC has determined that the requested change does not involve a significant hazards consideration.

Environmental Impact Consideration

10 CFR 51.22(c)(9) provides criteria for identification of licensing and regulatory actions for categorical exclusion for performing an environmental assessment. A proposed change for an operating license for a facility requires no environmental assessment if operation of the facility in accordance with the proposed change would not (1) involve a significant hazards consideration; (2) result in a significant change in the types or significant increases in the amounts of any effluents that may be released offsite; (3) result in an increase in individual or cumulative occupational radiation exposure. Progress Energy Carolinas (PEC), Inc., also known as Carolina Power and Light Company, has reviewed this request and determined that the proposed change meets 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 needs to be prepared in connection with the issuance of the amendment. The basis for this determination follows.

Proposed Change

The H. B. Robinson Steam Electric Plant (HBRSEP), Unit No. 2, Technical Specifications are revised to add a new analytical methodology used to determine acceptable core designs and provide inputs to methodologies that develop the core operating limits in the Core Operating Limits Report (COLR).

Basis

The proposed change meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9) for the following reasons.

1. As demonstrated in the No Significant Hazards Consideration Determination, the proposed change does not involve a significant hazards consideration.
2. As demonstrated in the No Significant Hazards Consideration Determination, the proposed change does not result in a significant increase in the consequences of an accident previously evaluated and does not result in the possibility of a new or different kind of accident. The proposed change is related to accident analysis methodology and does not result in any changes to plant equipment or normal operation, and as a result, there is no impact on plant effluents during normal operation. Therefore, the proposed change does not result in a significant change in the types or significant increases in the amounts of any effluents that may be released offsite.
3. The proposed change does not modify the method of operation, maintenance, or surveillance of systems and components. Therefore the proposed change does not result in an increase in individual or cumulative occupational radiation exposures.

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Attachment III to Serial: RNP-RA/05-0006
2 pages including cover page

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

**REQUEST FOR TECHNICAL
SPECIFICATIONS CHANGE REGARDING
REVISION TO CORE OPERATING LIMITS REPORT (COLR) REFERENCES**

MARKUP OF TECHNICAL SPECIFICATIONS PAGE

5.6 Reporting Requirements

5.6.5 CORE OPERATING LIMITS REPORT (COLR) (continued)

15. "Safety Evaluation by the Office of Nuclear Reactor Regulation Related to Amendment No. 87 to Facility Operating License No. DPR-23, Carolina Power & Light Co., H. B. Robinson Steam Electric Plant, Unit No. 2, Docket No. 50-261," USNRC, Washington, DC 20555, 7 Nov. 84.
16. ANF-88-054(P), "PDC-3: Advanced Nuclear Fuels Corporation Power Distribution Control for Pressurized Water Reactors and Application of PDC-3 to H. B. Robinson Unit 2," approved version as specified in the COLR.
17. ANF-88-133 (P)(A), "Qualification of Advanced Nuclear Fuels' PWR Design Methodology for Rod Burnups of 62 Gwd/MTU," approved version as specified in the COLR.
18. ANF-89-151(A), "ANF-RELAP Methodology for Pressurized Water Reactors: Analysis of Non-LOCA Chapter 15 Events," approved version as specified in the COLR.
19. EMF-92-081(A), "Statistical Setpoint/Transient Methodology for Westinghouse Type Reactors," approved version as specified in the COLR.
20. EMF-92-153(P)(A), "HTP: Departure from Nucleate Boiling Correlation for High Thermal Performance Fuel," approved version as specified in the COLR.
21. XN-NF-85-92(P)(A), "Exxon Nuclear Uranium Dioxide/Gadolinia Irradiation Examination and Thermal Conductivity Results," approved version as specified in the COLR.
22. EMF-96-029(P)(A), "Reactor Analysis System for PWRs," approved version as specified in the COLR.
23. EMF-92-116, "Generic Mechanical Design Criteria for PWR Fuel Designs," approved version as specified in the COLR.
24. EMF-2103(P)(A), "Realistic Large Break LOCA Methodology for Pressurized Water Reactors," approved version as specified in the COLR.

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2 pages including cover page

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**REQUEST FOR TECHNICAL
SPECIFICATIONS CHANGE REGARDING
REVISION TO CORE OPERATING LIMITS REPORT (COLR) REFERENCES**

RETYPE TECHNICAL SPECIFICATIONS PAGE

5.6 Reporting Requirements

5.6.5 CORE OPERATING LIMITS REPORT (COLR) (continued)

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24. EMF-2103(P)(A), "Realistic Large Break LOCA Methodology for Pressurized Water Reactors," approved version as specified in the COLR.

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Attachment V to Serial: RNP-RA/05-0006
48 pages including cover page

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

**REQUEST FOR TECHNICAL
SPECIFICATIONS CHANGE REGARDING
REVISION TO CORE OPERATING LIMITS REPORT (COLR) REFERENCES**

EMF-3030(NP)

**Robinson Nuclear Plant
Realistic Large Break LOCA Analysis**

February 2004

Non-Proprietary Version