



Carolina Power & Light Company

MAY 10 1984

SERIAL: NLS-84-206

Director of Nuclear Reactor Regulation
Attention: Mr. D. B. Vassallo, Chief
Operating Reactors Branch No. 2
Division of Licensing
United States Nuclear Regulatory Commission
Washington, DC 20555

BRUNSWICK STEAM ELECTRIC PLANT, UNIT NO. 1
DOCKET NO. 50-325/LICENSE NO. DPR-71
REQUEST FOR LICENSE AMENDMENT
EXCESS FLOW CHECK VALVE SURVEILLANCE INTERVAL EXTENSION

Dear Mr. Vassallo:

SUMMARY

In accordance with the Code of Federal Regulations, Title 10, Parts 50.90 and 2.101, Carolina Power & Light Company (CP&L) hereby requests a revision to the Operating License (OL) for the Brunswick Steam Electric Plant, Unit 1. This proposed OL change requests a one-time only deferment of Technical Specification (TS) required surveillance involving full-stroke cycling of four reactor instrumentation system isolation valves until the outage scheduled to begin no later than November 2, 1984.

DISCUSSION

The valves involved in this request are excess flow check valves (EFCV) located in the instrument sensing lines on drywell (DW) penetrations X-53A, X-53B, X-69F, and X-83A. These instrument lines provide input to reactor instrumentation transmitters as described below:

<u>Penetration</u>	<u>EFCV</u>	<u>Function</u>	<u>Instrument Tag Nos. and Function</u>
X-53A	1B21-F049C	Reactor Vessel Level Sensing- "High" Leg	1B21-LT-N017A-1 RPS Channel A Low Level 1 1B21-LT-N017A-2 RCIC Channel A High Level Turbine Trip
X-53B	1B21-F047C	Reactor Vessel Level Sensing- "Reference" Leg	1B21-LT-N004C Feedwater Control High Level Main Turbine Trip
X-69F	1B21-F049D	Reactor Vessel Level Sensing- "High" Leg	1B21-LT-N017D-1 RPS Channel D Low Level 1

8405170202 840510
PDR ADQCK 05000325
P PDR

411 Fayetteville Street • P. O. Box 1551 • Raleigh, N. C. 27602

Handwritten:
A001
w/ check
\$4,000
#4009476

X-83A

1B21-F047D

Reactor Vessel
Level Sensing-
"Reference" Leg1B21-LT-N017D-2
HPCI Channel D
High Level Turbine Trip

Attachment 2 provides a diagram which illustrates the equipment arrangement.

Brunswick Steam Electric Plant (BSEP) Technical Specification Section 4.6.3.4 requires that each reactor instrumentation system isolation valve be demonstrated operable at least every 18 months by cycling each valve through at least one full cycle of travel. The four EFCVs involved in this request were last tested on October 2, 1982. Utilizing the maximum surveillance period of 125 percent, the latest required performance date is August 19, 1984. This proposed OL revision will permit a one-time only extension of the surveillance interval until the outage scheduled to begin no later than November 2, 1984. The requested extension results in only an additional 11 weeks, or a 10.9 percent increase, in the maximum surveillance interval permitted by the TS.

If the unit should experience a forced outage prior to November 2, 1984, the expected duration of the outage will be evaluated. If at any time the expected remaining duration of the outage and unit conditions permit, the surveillance will be performed during the forced outage. It is anticipated that an outage of at least 10 days duration will be required to permit performance of the testing in a safe manner.

The scheduled date for the next performance of the surveillance test will be based on the original due date, not the extended due date.

The testing of the EFCV is normally performed during refueling outages at system hydrostatic test conditions. The testing cannot be performed during Operational Conditions 1 or 2 due to the potential for a reactor scram resulting from hydraulic spikes involving the reactor protection system (RPS) safeguard channel transmitter associated with the EFCV being tested and the RPS safeguard channel transmitter which is hydraulically connected to the same reactor pressure vessel (RPV) instrument nozzle (see Attachment 2).

Testing in Operational Condition 3 is undesirable from a personnel safety standpoint and the potential for the spread of contamination in the event the EFCV fails to properly seat with the primary coolant temperature in excess of 212°F.

The EFCVs perform reactor coolant system and primary containment isolation functions in the unlikely event of an instrument line failure downstream of the EFCV. The instrument lines involved in this request are seismically qualified and were tested during a reactor pressure vessel hydrostatic test on June 1, 1983. In the unlikely event of a downstream piping failure and the simultaneous failure of the associated EFCV, flow through the break would be limited by a 1/4-inch flow restricting orifice located at the RPV instrument nozzle.

Carolina Power & Light Company believes that the extension of the maximum surveillance intervals from August 19, 1984 until the outage scheduled to begin no later than November 2, 1984 does not result in a significant increase in risk to the public's health and safety.

REASON FOR REQUEST

Carolina Power & Light Company has already made arrangements to purchase 500 MWe of generation during the summer-peak months due to the unavailability of Brunswick Unit 2 and H. B. Robinson Unit 2 during this period. Even with this additional 500 MWe, the projected CP&L reserves during the week of August 19, 1984 will be only approximately 400 MWe. If Brunswick Unit 1 is required to shut down to perform the EFCV surveillance test, CP&L system generation reserves would be reduced by its 790 MWe generation capability. Carolina Power & Light Company would then be forced to attempt to purchase additional electric generation during a period of expected high electricity usage. This problem is compounded by the potential for a coal miners' strike in September of 1984.

The extension of this surveillance until November 2, 1984, will result in the maximum utilization of CP&L nuclear generation capability resulting in the most effective conservation of coal stockpiles with the prospects for a coal miners' strike this fall.

CONCLUSION

Carolina Power & Light Company requests a one-time extension of the surveillance requirement for full-stroke testing of four EFCVs due to:

1. Power requirement with low system reserves.
2. Need to stockpile coal.
3. Potential for tripping of the RPS and resultant reactor scram if performed during operation.
4. Potential safety hazard if performed in Operational Condition 3.
5. Minimal extension of 11 weeks (10.9 percent increase) of the maximum surveillance interval permitted by the TS.

SIGNIFICANT HAZARDS ANALYSIS

Carolina Power & Light Company has reviewed this request and determined that extending the surveillance interval for the valve cycling of the EFCVs involved, from a maximum surveillance interval of 687 days to 762 days, does not constitute a significant reduction in the verification of operability of the involved EFCVs for the following reasons:

1. The high level of confidence in the instrument lines involved based on seismic qualification and hydrostatic testing.
2. The minimal increase in probability of a malfunction of the EFCVs resulting from the 11-week (10.9 percent) increase in the maximum surveillance frequency permitted by the TS.
3. The extremely low probability of the simultaneous failure of an instrument line and the associated EFCV.

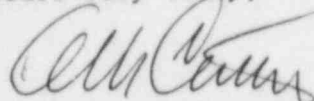
The proposed change to the OL represents relaxation in the surveillance requirements; however, CP&L believes that the length of the requested extension is minimal with respect to the maximum allowable frequency and that the probability of the need for the EFCVs to function during the proposed extension is very small. Therefore, the result of this change, while reducing the safety margin, is clearly within the acceptance criteria. Thus, this proposed change is similar to an example of "no significant hazards consideration" in the guidance provided by the Commission (48 FR 14870); namely, a change which "may reduce in some way a safety margin but where the results are clearly within all acceptance criteria with respect to the system as specified in the Standard Review Plan." Carolina Power & Light Company, therefore, believes the proposed change involves no significant hazards consideration.

ADMINISTRATIVE INFORMATION

The proposed revision to the Brunswick Unit 1 Operating License is provided in Attachment 1. Carolina Power & Light Company has evaluated this request in accordance with the provisions of 10 CFR 170.22 and has determined that a Class III license amendment fee is required. A check for \$4,000 is enclosed in payment of the license amendment fee.

Should you have any questions concerning this submittal, please contact our Licensing Staff.

Yours very truly,



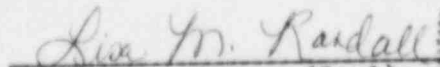
A. B. Cutter - Vice President
Nuclear Engineering & Licensing

MAT/ccc (9989MAT)

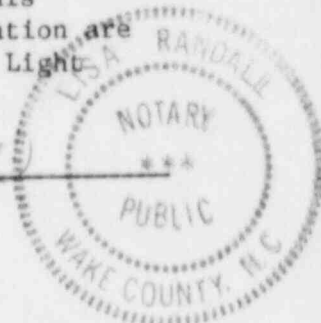
Attachments

cc: Mr. Dayne H. Brown
Radiation Protection Branch
Division of Facility Services
Department of Human Resources
Mr. D. O. Myers (NRC-BSEP)
Mr. J. P. O'Reilly (NRC-RII)
Mr. M. Grotenhuis (NRC)

A. B. Cutter, having been first duly sworn, did depose and say that the information contained herein is true and correct to the best of his information, knowledge and belief; and the sources of his information are officers, employees, contractors, and agents of Carolina Power & Light Company.


Notary (Seal)

My commission expires: 5/18/88



ATTACHMENT 1

SERIAL: NLS-84-206

BRUNSWICK STEAM ELECTRIC PLANT

PROPOSED UNIT 1 OPERATING LICENSE REVISION

CP&L SERIAL NO. 84TSB22

Revise Paragraph C.2.b to read as follows:

The end of the current surveillance period for the surveillance requirements below may be extended beyond the time limit specified by Technical Specification 4.0.2a. After November 2, 1984, the plant shall not be operated in Operational Conditions 1, 2, or 3 until the surveillance requirements listed below have been completed. Upon accomplishment of the surveillances, the provisions of Technical Specification 4.0.2a shall apply.

Technical Specification 4.6.3.4; as applicable to excess flow check valves B21-F047C, B21-F047D, B21-F049C, and B21-F049D.

ATTACHMENT 2

SERIAL: NLS-84-206

BRUNSWICK STEAM ELECTRIC PLANT

UNIT 1 FLOW CHECK VALVE ARRANGEMENT EXCESS

CP&L SERIAL NO. 84TSB22

