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VARGA,S.A. Operating Reactors Branch 1

SUBJECT: Summarizes determination of RCS flow & relationship to supporting safety analyses for Cycle 10 operation,per NRC request,Results calorimetric flow test will be provided subsequent to return to power.

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Director of Nuclear Reactor Regulation
Attention: Mr. Steven A. Varga, Chief
Operating Reactors Branch No. 1
Division of Licensing
United States Nuclear Regulatory Commission
Washington, DC 20555

H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2
DOCKET NO. 50-261/LICENSE NO. DPR-23
REACTOR COOLANT SYSTEM FLOW DETERMINATION

Dear Mr. Varga:

INTRODUCTION:

During recent conversations with members of the NRC Staff regarding the H. B. Robinson Unit No. 2 (HBR2) Cycle 10 reload, several questions were raised concerning the determination of reactor coolant system (RCS) flow and its relationship to the supporting safety analyses for Cycle 10 operation. The following summarizes the conversation and documents Carolina Power & Light Company's (CP&L) commitments to Staff requests.

SUMMARY OF RCS FLOW DISCUSSION:

A calorimetric flow test of the RCS is performed subsequent to any significant change in the RCS configuration (i.e., substantial steam generator tube plugging). When the plant is brought to near full power, the elbow taps are set to indicate 100 percent flow. As soon as practical after the plant is at steady-state full power, a calorimetric flow test is performed and evaluated to ensure that measured RCS flow, less uncertainties, is greater than the flow used in the safety analyses (97.29×10^6 lbm/hr). If the measured flow, less uncertainties, is less than the safety analyses value, the plant would be shut down until new analyses are performed or the condition causing reduced flow is corrected.

The Company is not aware of any events other than those described in Chapter 15 of the Standard Review Plan that will cause a significant change in RCS flow. Any significant reduction in RCS flow in a single loop will result in an increase in loop ΔT and an associated alarm. Reduction in flow to 90 percent of normal indicated flow established by elbow tap measurements causes the reactor protective system to initiate a plant trip. This trip setpoint is specified in Technical Specification (TS) 2.3.1.2(f).

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COMMITMENTS:

The Company commits to provide the NRC with the results of the calorimetric flow test performed subsequent to return to power.

If the assumed value of RCS flow used in the safety analyses is > 90 percent of the measured RCS flow less uncertainties, CP&L will propose a TS change to reset the low reactor coolant loop flow trip setpoint to a value that corresponds to the safety analyses RCS flow number. If the safety analyses RCS flow is $\leq$ 90 percent of the measured RCS flow less uncertainties, TS 2.3.1.2(f) will remain unchanged.

CONCLUSION:

It is CP&L's understanding that the above discussion and commitments enable the Core Performance Branch to release the Safety Evaluation Report supporting Cycle 10 operation. Please contact Mr. Sherwood Zimmerman at (919) 836-6242 if you have any questions concerning this letter or need additional information.

Yours very truly,

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

ABC/SDF/mf (733SDF)

cc: Mr. J. P. O'Reilly (NRC-RII)
Mr. G. Requa (NRC)
NRC Resident Inspector (RNP)