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SHAW,H.G. Siemens Power Corp. (formerly Siemens Nuclear Power Corp.,
RECIP.NAME RECIPIENT AFFILIATION
DRESSER,T.M. Carolina Power & Light Co.

SUBJECT: Forwards proposed rev to TS 3.2.3 & unreviewed safety question assessment re RCS flow rate.W/o encl.

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April 22, 1994
HGS:137:94

Mr. T. M. Dresser
Contract Administrator
Carolina Power & Light Company
412 Wilmington Street
Raleigh, North Carolina 27602

Docket 50-400
(TAC M89450)

Dear Mr. Dresser:

PROPOSED REVISION TO TECHNICAL SPECIFICATION 3.2.3 FOR SHEARON HARRIS

Technical Specification 3.2.3 requires Reactor Coolant System (RCS) total flow rate to be greater than 299,998 gpm (including measurement uncertainty for core flow) or thermal power must be reduced to a very low power level. To preclude major power reductions in response to a minor change in the measured RCS flow rate, a Technical Specification change has been developed which permits reduced power operation as a function of flow rate, for RCS flow rate reductions of up to 5% below 299,998 gpm. The proposed revision allows operation at flow rates slightly lower than 299,998 gpm if thermal power is reduced by 1.5% of Rated Thermal Power (RTP) for each 1% RCS flow rate is less than 299,998 gpm.

To support RCS flow rates less than 299,998 gpm, RCS flow rate and power will be traded off against one another to maintain current DNBR margins. Along with the reduction in power, $F_{\Delta H}$ must be maintained at a value that is less than or equal to the 100% RTP Technical Specification limit on $F_{\Delta H}$ including measurement uncertainty. In addition, the Power Range Neutron Flux - High Trip Setpoint needs to be reduced by the same amount (% RTP) as the required power reduction (1.5% RTP per 1% RCS flow). The reduction of the high flux setpoint ensures that the DNBR margin for the analyses of record is maintained for those events assumed to utilize the Power Range Neutron Flux - High Trip Setpoint trip function.

With the proposed Technical Specification revision, DNBR margin for the analyses of record will be maintained for those events that depend on Overtemperature ΔT (OTΔT) protection. In the OTΔT equation, the term ΔT is the measured ΔT and the term ΔT_0 is the indicated ΔT at RTP. The ratio of $\Delta T/\Delta T_0$ is thus equivalent of %RTP and is compared to the OTΔT trip setpoint. By maintaining ΔT_0 at or below the equivalent ΔT at 100% RTP and the current Technical Specification minimum flow rate, any flow deficiency

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will result in an increase in the actual ΔT and an overestimation of power level. The overestimation of power is equivalent to a trip setpoint reduction of approximately 1% RTP per 1% flow deficiency and therefore maintains DNBR margin for those events reliant upon the OTΔT trip.

The proposed revision to Technical Specification 3.2.3 is included in Attachment 1 and the unreviewed safety question assessment is included in Attachment 2.

Very truly yours,

JC Hilliard for

H. G. Shaw
Contract Administrator

HGS:JCH:dar
Enclosure

cc: Bob Duncan

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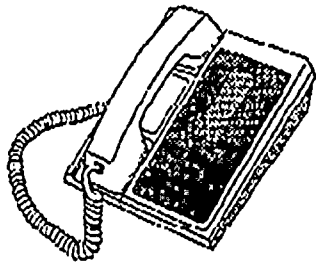

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