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April 21, 1992

ELV-03653
001531

Docket Nos. 50-424
50-425

TAC-M82130
M82131

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D. C. 20555

Gentlemen:

VOGTLE ELECTRIC GENERATING PLANT
REQUEST FOR ADDITIONAL INFORMATION
THERMAL DESIGN FLOW

By letter ELV-03196 dated November 12, 1991, Georgia Power Company (GPC) requested a revision to the reactor coolant system (RCS) thermal design flow (TDF). In a telephone call on April 14, 1992, the NRC staff requested additional information concerning the analyses of inadvertent opening of a steam generator relief or safety valve, steam system piping failure, and the main steam line break information used for the superheat study. This information is provided in the following paragraphs of this letter.

The inadvertent opening of a steam generator relief or safety valve and the steam system piping failure were analyzed using the LOFTTRAN code. The departure from nucleate boiling ratio (DNBR) was evaluated using the W-3 correlation and the THINC code. These evaluations used the Westinghouse Standard Thermal Design Procedure. For system pressures greater than 1,000 psia, the W-3 DNBR correlation limit is 1.30; for system pressures in the range of 500 psia to 1,000 psia, the correlation limit is 1.45. The analyzed values of the DNBR were reduced to account for penalties such as core designs using both LOPAR and VANTAGE-5 fuel. The resulting calculated DNBR was above the applicable correlation limits for both events.

The main steam line break information used for the superheat study for VEGP Units 1 and 2 is discussed in further detail in section 3.1.5.7 of enclosure 5, to letter ELV-03375, dated February 28, 1992. The revised thermal design flow was used for the calculation of the mass and energy release used for evaluating the environmental effects of steam line breaks outside containment. Changes in thermal design flow have a negligible effect on the calculation of mass and energy releases from steam line breaks because the mass and energy release is primarily determined by the secondary side initial conditions. Small changes in

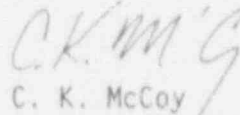
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RCS flow do not significantly affect the energy transfer from the core to the secondary side over the course of the analyzed event.

Sincerely,


C. K. McCoy

CKM/HWM/gmb

xc: Georgia Power Company
Mr. W. B. Shipman
Mr. M. Sheibani
NORMS

U. S. Nuclear Regulatory Commission
Mr. S. D. Ebner, Regional Administrator
Mr. D. S. Hood, Licensing Project Manager, NRR
Mr. B. R. Bonser, Senior Resident Inspector, Vogtle