

C. K. McCoy  
Vice President, Nuclear  
Vogtle Project



February 18, 1993

ELV-05251  
003066

Docket Nos. 50-424  
50-425

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

VOGTLE ELECTRIC GENERATING PLANT  
ENVIRONMENTAL EFFECTS OF POWER UPRATING

Gentlemen:

By letter ELV-03375, dated February 28, 1992, Georgia Power Company (GPC) requested license amendments for the Vogtle Electric Generating Plant (VEGP) Units 1 and 2 which will allow operation at the engineered safety features design power level of 3565 MWt. These changes will allow the electrical output of each unit to be increased by about 50 MWe. Included with the request was a summary of an evaluation of the effects of operating at the increased power level which concluded that the proposed uprate did not constitute an unreviewed environmental question.

The NRC Staff requested additional information concerning (1) the need for the additional power, (2) the effects of the power uprating on the National Pollutant Discharge Elimination System (NPDES) Permit, (3) the effects of additional use of groundwater, and (4) the basis for the conclusion that the environmental effects for the uprated conditions are within those previously evaluated.

- 1) The Southern Electric System (SES) experienced substantial load growth during the 1980s. By the late 1980s, the system recognized that new sources would be needed in the early- and mid-1990s.

Three of the five load-serving companies in the system filed for certification of new generating units in 1991 and 1992. The Alabama Public Service Commission certified the need for 720 MW of new capacity at the Greene County site for completion in 1995 and 1996. The Georgia Public Service Commission certified the need for 160 MW in 1994 for Savannah Electric and 480 MW of new capacity in 1994 and 1995. Georgia Power Company filed in early 1993 for an additional 160 MW of capacity in 1995 and released a request for proposals for up to 800 MW in 1996 and up to 800 MW in 1997 of independent power.

All of these certifications and requests for proposals assumed the VEGP uprates will be successful, or more capacity would have been needed.

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U. S. Nuclear Regulatory Commission

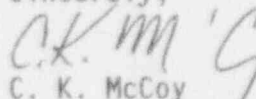
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- 2) The evaluation of the effects of operation at the increased power level on water discharges subject to the NPDES Permit indicates that discharge parameters do not change from parameters evaluated in the Final Environmental Statement (FES). The discharge characteristics on which the NPDES Permit was based are also not affected by the proposed increase in power. Therefore, no modification to the existing NPDES Permit is required.
- 3) The projected increase of 30 gpm per unit in groundwater usage that was indicated in ELV-03375 has been evaluated. The FES for VEGP was based on a conservatively estimated total groundwater usage of 840 gpm for the two units. Operating experience has shown that actual total groundwater usage based on current data is approximately 750 gpm. The expected additional 60 gpm withdrawal associated with the proposed power increase does not result in a total groundwater withdrawal rate (810 gpm) that exceeds the 840 gpm rate defined in the FES. In addition, the 810 gpm (1,166,400 gpd) withdrawal rate does not exceed the withdrawal limit defined in the Permit to Use Groundwater issued to VEGP by the Georgia Department of Natural Resources - Environmental Protection Division. The permit authorizes an average withdrawal rate of 5,500,000 gpd. As such, no additional evaluation of groundwater withdrawal is necessary to support the proposed increase in power.
- 4) The environmental effects of VEGP operation were evaluated based on conservative estimates of operating conditions. The results were summarized in the FES. The effects of operation at the increased power level have been evaluated relative to the FES, and it has been determined that the conclusions of the FES remain valid for operation at uprated conditions. The plant operating parameters impacted by the proposed uprate remain within the bounding conditions on which the conclusions of the FES are based.

The additional information described above does not alter the conclusions or information provided in our letter ELV-03375.

Sincerely,

  
C. K. McCoy

CKM/HWM/gmb

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

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