December 31, 1996

EA 96-479

Georgia Power Company
ATTN: Mr. C. K. McCoy
Vice President
Vogtle Electric Generating Plant
P. O. Box 1295
Birmingham, AL 35201

SUBJECT: NOTICE OF VIOLATION (NRC Inspection Report Nos. 50-424 and 50-425/96-11)

This refers to the inspection conducted during the period September 29 through November 9, 1996, at your Vogtle Electric Generating Plant (VEGP). The inspection included a review of the facts and circumstances surrounding installation deficiencies associated with certain safety-related motor coolers as well as the program for maintaining this equipment. The results of this inspection were discussed with members of your staff on November 12, 1996, and were formally transmitted to you by letter dated December 5, 1996. In addition, on November 27, 1996, you submitted Licensee Event Report No. 50-424/96-010 which addressed the inoperability of the Unit 1 safety injection pump B (1B SIP) due to degraded motor cooling. An open predecisional enforcement conference was conducted in the Region II office on December 19, 1996, with you and members of your staff to discuss the apparent violation, the root causes, and corrective actions to preclude recurrence. A list of conference attendees, a copy of your presentation materials, and NRC slides are enclosed.

Based on the information developed during the inspection and the information that was provided during the conference, the NRC has determined that violations of NRC requirements occurred. The violations are cited in the enclosed Notice of Violation (Notice), and the circumstances surrounding them are described in detail in the subject inspection report. Violation A involved the inoperability of the 1B SIP for a period greater than that allowed by Technical Specifications (TS) due to inadequate pump motor cooling. The inoperable condition existed from at least September 1991 when maintenance was last performed on the 1B SIP motor coolers and may have existed for some indeterminate period prior to that time. Specifically, during the period October 23-25, 1996, you determined that the cooling flow through the two motor coolers for this pump was degraded to approximately one-sixth of the normal flow. The condition was caused by improper installation of a gasket on the inboard motor cooler which blocked all flow in that cooler and improper installation of a plenum in the other motor cooler which reduced flow through it by two-thirds. In addition, your subsequent investigation identified similarly reversed plenums on a Unit 2 Train A containment spray pump motor cooler, a Unit 1 Auxiliary Component Cooling Water (ACCW) Pump 2 motor cooler, and both Unit 2 ACCW Pump 1 motor coolers.

Violation B involves your failure to establish adequate procedures for the disassembly and reassembly of the motor coolers during maintenance activities. Although some guidance was provided in the maintenance checklist to instruct personnel to re-install gaskets and plenums, the procedure was general and provided insufficient specific guidance or precautions regarding gasket or plenum orientation. The procedural deficiency was compounded by the lack of detailed information in the vendor manuals and a lack of knowledge on the part of plant personnel that the motor coolers were three-pass coolers instead of the assumed one-pass configuration.

Although the inoperability of the 1B SIP did not have a significant consequence to safety because it was not called upon to operate during this period, the violations are nonetheless of significant regulatory concern because an important emergency core cooling system (ECCS) component was inoperable for an extended period of time. Although your safety analysis indicates that the 1B SIP would have operated for approximately one-hour post-accident, it would have likely failed following that period due to motor bearing failure resulting in its unavailability for subsequent accident mitigation. The NRC also recognizes that the overall safety function was not lost in this case due to the availability of the 1A SIP. However, as you described at the conference, there were periods during the time in which the 1B SIP was inoperable that the 1A SIP was out of service for maintenance or testing; thus, the plant was operated for short periods of time in a condition which was prohibited by TS. Therefore, these violations are classified in the aggregate in accordance with the "General Statement of Policy and Procedures for NRC Enforcement Actions" (Enforcement Policy), NUREG-1600, as a Severity Level III problem.

In accordance with the Enforcement Policy, a base civil penalty in the amount of $50,000 is considered for a Severity Level III problem. Because your facility has been the subject of escalated enforcement action within the last two years the NRC considered whether credit was warranted for *Identification* and *Corrective Action* in accordance with the civil penalty assessment process described in Section VI.B.2 of the Enforcement Policy. The NRC concluded that credit was warranted for *Identification* because your staff identified the violations. The attentiveness and questioning attitude of the plant equipment operator responsible for identifying and pursuing temperature differences in the two motor coolers for the 1B SIP and the site engineer who identified the possibility of reversing the motor cooler plenums are particularly noteworthy. With regard to consideration for *Corrective Action*, at the conference you stated that your immediate and long term corrective actions included: (1) proper installation of the gasket and plenum on the 1B SIP; (2) inspection and correction of other ECCS motor coolers for reversed plenums; (3) development of a plant procedure which provides detailed instruction for correct disassembly and reassembly of motor coolers and revision of the existing maintenance checklist to reference the new procedural requirements; (4) inspection and correction of ACCW motor coolers plenum installation deficiencies; (5) training of maintenance personnel scheduled in January 1997 and continuing as part of the Continuing Training Program; (6) establishment of concurrent, dual verification of gasket and plenum installation; and (7) initiation of a review to determine the appropriate methodology for

periodic functional testing of heat exchangers. Based on the above, the NRC determined that your corrective actions were prompt and comprehensive, and credit was warranted for this factor.

Therefore, to encourage prompt identification and comprehensive corrective action for violations, I have been authorized, after consultation with the Office of Enforcement, not to propose a civil penalty in this case. However, significant violations in the future could result in a civil penalty.

You are required to respond to this letter and should follow the instructions specified in the enclosed Notice when preparing your response. In addition, at the conference you stated that efforts have been initiated to determine the appropriate functional testing criteria for heat exchangers. Due to the importance of this effort in assuring future operability of heat exchangers for safety-related equipment, we request that your response include a detailed description and proposed schedule for your actions in this regard. The NRC will consider your response, in part, to determine whether further enforcement action is necessary to ensure compliance with regulatory requirements.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter, its enclosures, and your response will be placed in the NRC Public Document Room (PDR).

Sincerely,

Stewart D. Ebneter
Regional Administrator

Docket Nos. 50-424, 50-425
License Nos. NPF-68, NPF-81

Enclosures: 1. Notice of Violation
2. Conference Attendees
3. NRC Slides
4. Licensee Presentation Material

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