April 27, 2005

MEMORANDUM TO: John A. Nakoski, Chief, Section 1
Project Directorate II
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

FROM: Christopher Gratton, Sr. Project Manager, Section 1 ***/RA/***
Project Directorate II
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

SUBJECT: HATCH NUCLEAR PLANT, UNITS 1 AND 2 - FACSIMILE TRANSMISSION OF DRAFT REQUEST FOR ADDITIONAL INFORMATION (TAC NOS. MC3873 AND MC3874)

The Nuclear Regulatory Commission (NRC) staff transmitted the attached facsimile containing questions to Mr. Ozzie Vidal of the Southern Nuclear Operating Company on February 8, 2005. The questions supported a conference call with the licensee held on February 24, 2005, regarding the licensee's submittal dated July 20, 2004. The licensee's application proposed specific changes to the Plant Hatch DC electrical system consistent with Technical Specification Task Force (TSTF) change traveler TSTF-360, and requested the allowed out-of-service time on station batteries from 2 to 12 hours. This memorandum and the attached questions do not convey or represent an NRC staff position regarding the licensee's request.

Docket Nos. 50-321 and 50-366

Attachment: Draft Request for Additional Information sent February 8, 2005

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REQUESTS FOR ADDITIONAL INFORMATION
LICENSE AMENDMENT REQUEST
DC SOURCES
SOUTHERN NUCLEAR OPERATING COMPANY
HATCH NUCLEAR PLANT, UNITS 1 AND 2
DOCKET NOS. 50-321 AND 50-366

1. General Design Criterion 17, “Electric power systems,” of Appendix A, “General Design Criteria for Nuclear Power Plants,” to Title10 of the *Code of Federal Regulations* (10 CFR) Part 50 requires, in part, that the safety function for each system (assuming the other system is not functioning) shall be to provide sufficient capacity and capability to assure that (1) specified acceptable fuel design limits and design conditions of the reactor coolant pressure boundary are not exceeded as a result of anticipated operational occurrences, and (2) the core is cooled and containment integrity and other vital functions are maintained in the event of postulated accidents.

   Additionally, 10 CFR 50.63, “Loss of all Alternating Current [AC] Power,” requires, in part, that each light-water-cooled nuclear power plant licensed to operate must be able to withstand for a specified duration and recover from a station blackout (SBO) as defined in 10 CFR 50.2. The specified duration shall be based on the following factors:

   (i) The redundancy of the onsite emergency AC power sources;

   (ii) The reliability of the onsite emergency AC power sources;

   (iii) The expected frequency of loss of offsite power; and

   (iv) The probable time needed to restore offsite power.

   The reactor core and associated coolant, control, and protection systems, including the station batteries and any other necessary support systems, must provide sufficient capacity and capability to ensure that the core is cooled and appropriate containment integrity is maintained in the event of a SBO for the specified duration.

   The initial conditions of design basis accidents and transient analyses in the Hatch Final Safety Analysis Report (FSAR), SAFETY ANALYSES Chapters 5, 6, and 14, assume engineered safety feature (ESF) systems are OPERABLE. The AC electrical power sources are designed to provide sufficient capacity, capability, redundancy, and reliability to ensure the availability of necessary power to ESF systems so that the fuel, reactor coolant system, and containment design limits are not exceeded.

   The OPERABILITY of the AC electrical power sources is consistent with the initial assumptions of the accident analyses and is based upon meeting the design basis of

the unit. This includes maintaining the onsite or offsite AC sources OPERABLE during accident conditions in the event of:

a. An assumed loss of all offsite power sources or all onsite AC power sources; and

b. A postulated worst case single failure.

Hatch FSAR Chapter 8, Section 8.4.2.2, "SBO Coping Analysis Assumptions," states that equipment needed to cope for the SBO coping duration is available at the site.

Provide a comparison of Division I and II components to show any key safety features that would be affected due to a loss of offsite power with one system having an inoperable battery. Will the loss of a Division I or II station service battery (A or B) alone result in a loss of any redundant features? What effect, if any, does this have on Hatch's SBO analyses (e.g., Coping capability)? Identify any procedures, compensatory measures, and/or analyses that may be associated with the above request.

2. In enclosure 4, page E4-15, of its July 20, 2004 submittal, the licensee stated:

> "Due to the diverse PSA [probabilistic safety assessment] model input that the Station Service Batteries have it is conservatively stated that no planned maintenance will occur during the time that the proposed AOT [allowed outage time] is invoked. In addition the proposed Station Service Battery extended AOT will only be used for emergent Station Service Battery work."

The actions described above (i.e., no planned maintenance to be performed during the proposed extended Completion Time, and the proposed extended Completion Time will only be utilized for emergent work) are critical to the acceptability of the proposed changes. How will the licensee assure that these actions are accomplished?