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the southern electric system

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April 29, 1985

Director of Nuclear Reactor Regulation
Attention: Mr. John F. Stolz, Chief
Operating Reactors Branch No. 4
Division of Licensing
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

NRC DOCKETS 50-321, 50-366
OPERATING LICENSES DPR-57, NPF-5
EDWIN I. HATCH NUCLEAR PLANT UNITS 1, 2
RESPONSE TO REGULATORY GUIDE 1.97
SER OPEN ITEMS

Gentlemen:

The subject NRC Safety Evaluation Report (SER) dated February 27, 1985, concluded that, except for five exceptions, Georgia Power Company (GPC) has provided an acceptable response to NRC guidance contained in Regulatory Guide 1.97, Revision 2. This letter provides supplemental GPC responses to the five open items, including additional justification for the adequacy of instrumentation described in our Regulatory Guide 1.97 comparison dated February 21, 1984.

Exceptions from the SER are restated, followed by the GPC response.

Exemption:

1. "Neutron flux--the licensee's present instrumentation is acceptable on an interim basis until Category 1 instrumentation is developed and installed (Section 3.3.1)."

Response:

Section VI B of our comparison dated February 21, 1984 provided detailed justification for Category 3 classification of Variable B.1, Neutron Flux. The SER Section 3.1.1, Neutron Flux does not identify any objection to the GPC arguments, but concludes, with no apparent basis, that the licensee should "...install Category 1 instrumentation when it becomes available."

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GPC continues to monitor industry development of improved neutron monitoring equipment. We will evaluate installation of improved equipment when available, but we cannot commit to replacement of existing reliable equipment with equipment of unproven design. As demonstrated in our February 21, 1984 comparison of existing instrumentation to the Regulatory Guide, Category 3 instrumentation is provided for this variable, and is acceptable for its application at Plant Hatch.

Exception:

2. "Coolant level in the reactor--the licensee should justify the lack of redundant instrumentation above the normal operating range (Section 3.3.3)."

Response:

Reactor Pressure Vessel (RPV) water level indication is required to assure that the reactor core remains covered and that the water level stays below the bottom of the main steam lines to avoid water carry-over which could damage the turbines which drive the high pressure make-up pumps. Turbine protection is provided by redundant high water level trips which isolate the turbines at 58" in the RPV. These high level trips terminate injection into the vessel and prevent the RPV level from exceeding 58" while pressurized. Once the reactor is depressurized and make-up is provided by motor driven pumps, water level above the operating range is not considered an emergency condition. Post accident, the operator will maintain water level using the qualified and redundant instrumentation provided for the operating range. The non-redundant instrumentation for levels above 60" is intended for use only during refueling when water level is raised to flood the refueling cavity. Therefore, GPC believes that the range of RPV level monitored by redundant instrumentation meets the intent of the Regulatory Guide, and that provision of redundant level indication for the RPV level range above 60" would not enhance the level of safety currently provided.

Based on the above it is our position that the instrumentation provided meets both the regulatory requirements that were the basis for licensing, and the intent of Regulatory Guide 1.97.

Exception:

3. "Radiation exposure rate--the licensee should show that the

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instrumentation for this variable has ranges that encompass the expected radiation levels in its locations (Section 3.3.6)."

Response:

The local area radiation monitors provided at Plant Hatch provide local area activity indication for personnel protection, release detection and assessment, and long-term release surveillance. The ranges provided do not encompass the expected radiation levels following an accident involving severe core damage. These instruments alarm in the main control room on a slight increase in local activity, and provide local indication and alarm functions as well. Radiological control procedures implemented in the plant require that the health physics department survey all areas alarmed, in addition to routine area surveys. The plant health physics department controls personnel access into areas based on both routine and pre-access surveys. Need for access to any area of the secondary containment is not anticipated for at least 30 days post-accident. Prior to any post-accident personnel access, portable radiation survey instruments and the results of secondary containment atmosphere sampling would be utilized to assess the potential dose to personnel.

In the event that the radiation levels exceed the ranges covered by this instrumentation, release detection and assessment, and long term release surveillance can be accomplished by portable survey instruments, atmosphere sampling and by monitors at the plant release points (main stack and reactor building vents).

It is Georgia Power Company's position that, based on the above, the existing radiation monitors, in conjunction with plant radiological control procedures, meet the intent of Regulatory Guide 1.97. No upgrade of this instrumentation is currently planned.

Exception:

4. "Suppression pool water temperature--environmental qualification, for the non-qualified channels, should be addressed in accordance with 10 CFR 50.49; the licensee should provide an analysis that addresses the seismic qualification programs that were the basis for plant licensing, or provide a commitment to upgrade the instrumentation (Section 3.3.8)."

Response:

This instrumentation is included on the NRC-approved list of equipment

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to be environmentally qualified in accordance with 10 CFR 50.49. In regard to seismic qualification, the four temperature elements for Hatch Unit 2 (T48-N009A-D) were qualified to the seismic criterion of IEEE 344-1971. The four temperature elements for Hatch Unit 1 (T48-N009A-D) were also qualified to the seismic criterion of IEEE 344-1971, but documentation to support this qualification is not available in our files. The manufacturer has been contacted for the purpose of obtaining replacement documentation to substantiate the seismic qualification. These qualifications comply with the qualification program used as the basis for Plant Hatch licensing.

Based on the above, it is our position that currently installed equipment meets the intent of the guidance contained in Regulatory Guide 1.97.

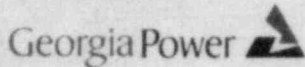
Exception:

5. "Cooling water flow to ESF system components--the licensee should upgrade the alternate instrumentation, plant service water output pressure, to Category 2, and provide the information required in Section 6.2 of NUREG-0737, Supplement 1 (Section 3.3.12)".

Response:

Based on characteristics and use of the service water system parameters indicated in the main control room, it is our position that the indication currently provided meets the intent of Regulatory Guide 1.97 as described below.

The plant service water system is provided with remote pump running and multiple system pressure indicators to demonstrate that the system is in operation and performing as intended. Proper system operation relies only on passive components with the exception of the service water pumps and remotely operated isolation valves. Individual engineered safety features (ESF) service water loads are provided with valve position, room temperature indication, and local temperature indications. If the service water pumps are operating, and the individual ESF cooling load isolation valves are open, the cooling system will function as designed and can be verified in the control room by pump running indications, valve position indications, multiple pressure indications, and by room temperature indications. A system leak will be detected by the equipment and floor drainage system instrumentation and by room temperature indications. Flow indication is not provided and would not be the preferred means of verifying system operation as discussed in the following paragraph.



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Symptom-oriented emergency operating procedures (EOPs) currently being implemented at Plant Hatch provide for operator confirmation that the service water system is operating properly, and provide specific instruction if proper operation is not confirmed. The operator is directed to check isolation valve status and two pressure instruments: 1) pump discharge pressure, and 2) system pressure at the inlet to the turbine building. The latter indication is downstream of the ESF cooling loads, and will indicate both loss of flow (i.e., due to pump failure or blockage upstream of that indication) or a system break. Pump running indications and valve positions can be used to confirm system operation in the event of loss of pressure indications. The actions called out in the new EOPs provide an appropriate check of system operation.

Adequacy of control room instrumentation will be addressed during a detailed control room design review (DCRDR) described in GPC submittal NED-84-556 dated October 23, 1984. Adequacy of this instrumentation will receive special attention during that review. We will address the need to upgrade service water instrumentation during the assessment phase of the DCRDR. In the interim, we will continue to rely on Category 3 pressure instrumentation as described in our comparison document dated February 21, 1984. No upgrades based on the guidance of Regulatory Guide 1.97 are currently being considered.

Please contact this office if you have any questions or comments.

Very truly yours,

A handwritten signature in cursive script, appearing to read "L. T. Gucwa".

L. T. Gucwa

PLS/mb

xc: H. C. Nix, Jr.
NRC Regional Administrator
Senior Resident Inspector