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Georgia Power

the southern electric system

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Nuclear Operations

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Director of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

NED-82-284

NRC DOCKETS 50-321, 50-366
OPERATING LICENSES DPR-57, NPF-5
EDWIN I. HATCH NUCLEAR PLANT UNITS 1, 2
STATUS OF CONTAINMENT PURGE AND VENT

Gentlemen:

Georgia Power Company (GPC) offers the following response to your letter of July 7, 1982: Status of Containment Purge and Vent. Our responses are given in the same order as the questions in your letter.

Our estimate of expected usage of the 18" purge valves is that they will be used less than 1% of the time which Primary Containment Integrity has been required. Currently there is no procedural mechanism on Unit 1 for measuring 18" purge valve usage. This will entail a procedure change for Unit 1 which will be implemented within sixty days.

Design information for debris screens was received from the NRC in mid-September 1982. This information is under engineering evaluation to determine placement of screens and a schedule for installation. We expect the engineering evaluation will be complete by January 1, 1983.

The reactor coolant system and drywell atmosphere have normal operating levels of radioactivity. A postulated LOCA would add a portion of the reactor coolant radioactivity to the containment atmosphere. Therefore, the radioactivity released through the purge valves during a LOCA would be a combination of these two sources. There would be no failed fuel source term since failure would be postulated to occur sometime after closure of the purge valves. In any event, these sources would yield a dose which is a small fraction of the 10 CFR Part 100 limits.

The subject of steam flood and jet impingement from a ruptured purge or vent line has been investigated. On both units the majority of the lines are fabricated from 150 lb. class pipe and thus do not present a rupture potential. On Unit 2 there is a pipe to duct interface which is located on the 130-foot elevation of the reactor building which could rupture if a LOCA were to occur while purge operations are in progress. A review of the existing HELB analysis has demonstrated that the environment created by a main steam line break in the pipe chase bounds that of a rupture in the ducting and is therefore acceptable. On Unit 1 there are two pipe to duct interfaces. One is located in the SGTS equipment room and the other is

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located in the torus room. The duct at these interfaces could rupture in the unlikely event of a LOCA while purge and/or vent operations are in progress. It has likewise been shown in both these areas that existing HELB analysis yields more severe environments than the SGTS duct rupture. In no case has it been determined that jet forces due to a ruptured duct present a danger to any essential equipment. Therefore, the design is considered acceptable.

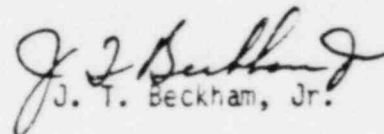
A review of the valve leak test data shows the maximum leak rate to be less than .004 CFM for the 18" purge valves. We believe this value to be low enough that on-line testing of the 18" purge valves should not be required. In any event, the installation of plant modifications to allow testing could only be performed during a unit outage. The weather at Plant Hatch could not be termed "severe"; therefore, this concern of the BTP disappears. If the concern is due to cyclic operation, then any required specification should be tied to cycles of valve operation and not duration between tests. Therefore, in view of our past experience with these valves, and given the absence of a "severe" weather condition which could degrade valve performance, we do not believe a revised Surveillance Requirement such as has been suggested is needed at Plant Hatch.

The requested information on valve operability has been provided in our May 21, 1981 letter to the Office of Nuclear Reactor Regulation from J. T. Beckham, Jr. The other questions of operability in your September 27, 1979, letter are not applicable to the type of installed valves at Plant Hatch.

It is believed that the current Technical Specifications on Containment Integrity more than adequately cover the aspects of Enclosure 4. The purge valves were part of the initial design for safety considerations. It is therefore redundant to say that they may be open for safety-related reasons. The only non-safety opening of a purge valve is an inadvertent one. To require seal replacement on a time frequency basis rather than by observed degradation is an arbitrary increase in required manpower and man-rem commitment which cannot be justified based on the good history of operation of these valves. Our experience has shown that continual maintenance on operable equipment increases the probability of failure.

If you have any further questions, please contact this office.

Very truly yours,


J. T. Beckham, Jr.

MJB/mb

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