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GKM

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G-GPC-7-346
October 29, 1987

cc: Georgia Power Company
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Mr. L.T. Gucwa
Manager, Nuclear Safety & Licensing
Georgia Power Company
P.O. Box 4545
Atlanta, GA 30302

SUBJECT: JUSTIFICATION FOR CONTINUED OPERATION (JCO) OF PLANT HATCH-2 DURING MSIV SURVEILLANCE TESTING

Dear Mr. Gucwa:

Attached is the subject JCO which provides a justification for operation of Hatch-2 at power levels at and below 75% rated with a main steam isolation valve (MSIV) reopened during surveillance testing of the remaining MSIV's.

This document was telecopied to J.D. Heidt on October 21, 1987.

Very truly yours,

R.P. Daly
Services Project Manager

RPD/rah

Attachment

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JUSTIFICATION FOR CONTINUED OPERATION OF PLANT HATCH DURING MSIV SURVEILLANCE TESTING

October 21, 1987

Plant Hatch Unit 2 is currently operating at 85% of rated power with one main steam isolation valve (MSIV) Out-of-Service and isolated. This MSIV was isolated because a recent surveillance test indicated that the valve stroke time was 2.3 seconds. Since this stroke time is shorter than the current minimum Technical Specification limit of 3 seconds, the valve was isolated. (Plant specific evaluations justifying operation in this mode have been performed by General Electric (GE) to demonstrate that the current Technical Specification Limits are bounding).

The plant, however, is now required to perform the quarterly MSIV surveillance testing on the remaining steamlines. In order to do this, with one steamline isolated, the operating power level would have to be reduced severely (approximately 50% of rated thermal power). This reduction would be required to prevent an inadvertent scram or isolation on high reactor pressure, high neutron flux, or high steam flow. Georgia Power Company (GPC) would prefer to reopen the isolated MSIV, while performing the surveillance testing from power levels at or below 75% of rated, in lieu of reducing the reactor power to a lower level and risking a spurious isolation or scram.

Since GPC intends to be operating with the fast stroking MSIV open for only a short period time (approximately three hours are expected to be necessary to perform the MSIV surveillance test), it is highly unlikely that the any unusual circumstances (e.g., loss of offsite power) would occur to initiate a closure of the MSIV. Additionally, the performance of the MSIV testing with all valves initially open will be far less likely to result in an inadvertent isolation signal due to high steam flow, than if the testing were performed at a reduced power level with one MSIV isolated.

In any event, the postulated consequences of an inadvertent closure of all four MSIVs from 75 % power, with one valve closing more rapidly than 3 seconds has been assessed. The two primary areas of concern are fuel thermal limits, and reactor overpressure. In all of the events which have been evaluated to establish the limiting minimum critical power ratio (MCPR), the MCPR occurs well before the time the MSIVs are signalled to close. Consequently, the more rapid closure of one MSIV will not impact the limiting fuel thermal margins. The transient event utilized to evaluate reactor overpressure is the MSIV closure with flux scram event. This event is initiated from 105 % of rated steamflow (approximately 104 % of rated thermal power) by the simultaneous closure of all MSIVs (the minimum technical specification of three seconds is assumed) with a coincident failure of the MSIV position switch scram signal. The reactor scram is assumed to occur later in the event due to a high neutron flux signal. The Cycle 7 reload licensing evaluation resulted in a calculated peak vessel pressure of 1255 psig for this event, which is 125 psi below the ASME code limit of 1375 psig. The initiation of this event from 75% of rated power with a faster closure of one of the four MSIVs is expected to result in a peak vessel pressure which is either bounded by or very close to the value determined in the reload licensing evaluation.

JUSTIFICATION FOR CONTINUED OPERATION OF PLANT HATCH
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Based upon the assessments above, it is concluded that the operation of Plant Hatch Unit 2 at power levels at and below 75 % of rated with the MSIV (with a rapid closure rate) reopened during the surveillance testing of the remaining MSIVs is justified given the low probability of an unexpected occurrence and the results of the assessment of the potential consequences of such an occurrence.

The information contained in this justification is believed by General Electric Company to be an accurate and true representation of the facts known, obtained or provided to General Electric at the time this information was prepared.

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