

Georgia Power Company
333 Piedmont Avenue
Atlanta, Georgia 30308
Telephone 404 526 7020

Mailing Address:
Post Office Box 4545
Atlanta, Georgia 30302

February 17, 1982



the southern electric system

J. T. Beckham, Jr.
Vice President and General Manager
Nuclear Generation

Director of Nuclear Reactor Regulation
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
DRYWELL AIRLOCK INTERLOCK DESIGN CHANGE PROPOSAL



Gentlemen:

LER 50-366/1978-043, dated October 6, 1978 reported an incident in which two workers were trapped inside the drywell airlock due to a malfunction of the personnel airlock interlock mechanism. This event required an entry through the CRD access hatch to enable the workers to exit the drywell. The possible consequences of a repeat of this occurrence to the health and safety of plant personnel present a need for the following proposed design change.

This design change would provide a means of overriding the mechanical interlock during a condition when personnel are inside the primary containment, or inside the access lock, and are unable to exit normally due to a jamming of the mechanical interlock.

The mechanical interlock will be maintained during normal plant operation and can only be overridden from outside the drywell by a key controlled selector switch. In addition, break glass stations will be provided inside the drywell and inside the airlock to override the interlock on the inner and outer doors respectively. This override is accomplished by means of an electrically driven clutch mechanism which separates when energized, thus uncoupling the interlock device. An alarm is provided in the Control Room when both doors of the personnel access lock become unlatched, or when the selector switch is operated, thus alerting the operator to the condition.

This design change does involve an unreviewed safety question as defined by 10 CFR 50.59, in that the consequences of an accident previously evaluated in the safety analysis report may be increased. The possibility could exist for a breach of primary containment concurrent with a LOCA which would increase potential consequences for the accident analyzed in HNP-2-FSAR Section 15.1.39. This is possible since the interlock override mechanism provides a means by which both drywell access lock doors might be open simultaneously. However, it should be noted that the procedure for use of the override feature states that only one door of the airlock is to be open at any given moment.

Handwritten note:
Aol w/check
\$4,400
S/ll

8203010254 820217
PDR ADOCK 05000322
P PDR

Director of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555
February 17, 1982
Page Two

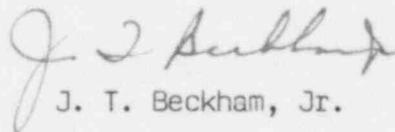
Access to the drywell is limited to three times per year under operating conditions (10% power or less) with a maximum allowable time of thirty minutes per visit. Furthermore, the frequency of occurrence of an airlock mechanism malfunction is quite low. This results in a very small probability for occurrence of the previously mentioned accident scenario.

During low power operating conditions, the drywell is an area of uncomfortably high heat and humidity. In the event that personnel were to become trapped in this area, they would be vulnerable to heat exhaustion or other health hazards if a means of rapid exit were unavailable. Therefore, this design change is necessary for the safety of personnel entering the drywell; this benefit more than outweighs the slight additional risk inherent in the proposed design.

A detailed description of this proposed design change and a sample procedure for response to the interlock override alarm are included in this submittal. Your rapid response would make it possible for this necessary design change to be completed during the Unit 2 outage scheduled for February 19, 1982.

We have determined the proposed changes to be a Class III amendment for one unit and a Class I amendment for the other unit. Enclosed are a determination of amendment class and payment of applicable fees.

Very truly yours,


J. T. Beckham, Jr.

CS/mb

Enclosure

xc: M. Manry
R. F. Rogers, III
J. P. O'Reilly (NRC - Region II)

NRC DOCKETS 50-321, 50-366
OPERATING LICENSES DPR-57, NPF-5
EDWIN I. HATCH NUCLEAR PLANT UNITS 1 AND 2
DRYWELL AIRLOCK INTERLOCK DESIGN CHANGE PROPOSAL

Pursuant to 10 CFR 170.22 (c), Georgia Power Company has evaluated the attached proposed amendments to Operating Licenses DPR-57 and NPF-5 and has determined that:

- a) The proposed design change does not require the evaluation of a new Safety Analysis Report or rewrite of the facility license;
- b) The proposed design change does not contain several complex issues, does not involve ACRS review, and does not require an environmental impact statement;
- c) The proposed design change does not involve a complex issue, an environmental issue or more than one safety issue;
- d) The proposed design change does involve a single safety issue, specifically, the proposed design change would defeat the drywell airlock interlock to allow for removal of personnel from the primary containment in the event of an interlock malfunction;
- f) The proposed change is therefore a Class III design change proposal for one unit and a Class I design change proposal for the other unit.

DETAILED DESCRIPTION OF DESIGN CHANGE PROPOSED
FOR DRYWELL AIRLOCK INTERLOCK MECHANISM

The present mechanism for operation of the drywell access lock doors consists of an arrangement of handwheels, shafts, and drive belts which can be used to open or close either door individually from either inside the drywell or airlock or outside the drywell. The drive shaft for each door has a ratchet which is engaged when the other airlock door is unlatched. The engaged ratchet pawl prevents the door from being opened, but not from being closed. This design allows only one door open at the time, unless the mechanism is tampered with.

The proposed design change would allow the interlock mechanism ratchet to be overridden on either door. The actual override mechanism proposed is an electric clutch, which when energized, would disengage the ratchet from the drive shaft for the door. The override energize signal would come from any of three stations. Just outside the drywell and airlock would be a key operated switch which could override the interlock on either door (but only one at a time). Inside the airlock would be a push button inside a break glass box which would disengage the exterior door ratchet. A similar break glass switch inside the drywell would defeat the interlock on the interior door.

Certain inherent features of the design would include a fail safe condition of the interlock (engaged) in the event of a loss of power since the override clutch must be energized to defeat the interlock. Also it should be noted that activation of the interlock override would not in itself violate primary containment; the airlock door(s) would still have to be opened by personnel. This means that accidental energization of the override by some unlikely drywell transient such as jet impingement on a break glass switch would not open the airlock doors.

SAMPLE PROCEDURE FOR RESPONSE TO
D/W PERSONNEL AIRLOCK INTERLOCK
DEFEATING MECHANISM
DRYWELL PERSONNEL AIRLOCK
INTERLOCK DEFEATED

A. Condition

Alarm is received on panel 1H11-P653, indicating the drywell personnel airlock interlock has been defeated, or both airlock doors are unlatched.

B. Action

1. Note any coincident alarms which could indicate that the alarm was caused by conditions in the drywell. (i.e., jet impingement on a breakglass station)
2. Dispatch a member of the operations staff to the drywell personnel airlock with a key for the airlock defeating mechanism switch and a radio. This person will maintain primary containment as long as personnel safety is not compromised.

Note: Maintain primary containment per the 1 hour time limit of Tech Specs 3.6.1.1

3. Make contact with personnel who defeated the interlock mechanism by the phone system or drywell entry by a rescue team.
4. When all personnel who may have been in the drywell have been accounted for de-energize the drywell personnel airlock interlock override at distribution panel 2R25-S126, and ensure that both airlock doors are closed and latched. Return the system to service when operating conditions permit.

Note: The glass in the breakglass stations may have to be replaced each time the system is used.