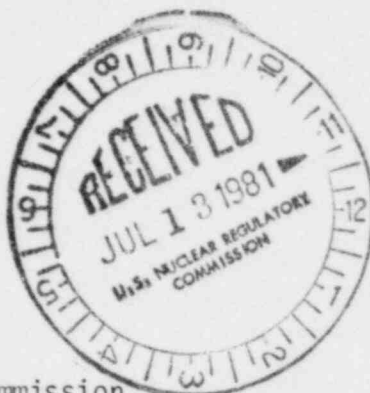


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MANAGER
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July 8, 1981

BECo. Ltr. #81-156

Mr. Thomas A. Ippolito, Chief
Operating Reactors Branch #2
Division of Licensing
Office of Nuclear Regulatory Commission
Washington, D. C. 20555

License No. DPR-35
Docket No. 50-293

Supplement to Information on ADS
Valve Reset & Reset of E.S.F. Actuation Signal
IE Bulletin #80-06

Reference a) Telephone conversation dated 4-13-81
between BECo's Messrs. J. Keyes and
J. Coughlin & NRC's Messrs. M. Williams
and P. Bender & EG&G's Messrs. K. Jacobi
and D. Hackett.

Dear Sir:

As requested in Reference a) the following information is provided in response
to Items 1 & 2 of the telephone conversation dated 4-13-81.

Item 1

Provide further clarification and justification for not modifying the ADS circuits.
Amplify your discussion of the operation of these valves as a set (eg., blow down
rate, torus load and temperature distribution, etc.).

Response

Calculations were performed by our Nuclear Analysis Group to show that the
scattered ADS valve reset points will decrease the reactor inventory and there-
fore reduce the core cooling capability. It was assumed for these calculations
that the operator was fully aware of the conditions and no extra time was required
for decision making. The response time at best is estimated to be about 20 to 30
seconds for the operator to reset the last valve. The amount of inventory which
is released during this period of time, in the form of steam in the suppression
pool is 13,625 to 19,779 lbs. respectively. This is estimated at 1000 psi reactor
vessel pressure. The same phenomenon applies to conditions with lower pressure,
however, the inventory loss will be less.

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It is for this reason that a change in the reset operation of the ADS valves would jeopardize the existing safety system and thus we do not wish to change this system unless an improvement in safety can be demonstrated.

Item 2

Provide additional justification for not modifying the following valves which do not remain in their emergency mode upon reset of the ESF actuation signal.

- a) hydrogen and oxygen monitoring system isolation valves;
- b) standby gas treatment system isolation valves;
- c) torus vacuum breaker valves;
- d) secondary containment isolation valves.

Response

In response to Question 2 a-d our response will be submitted in two parts.

- A) Description of the modification to the hydrogen & oxygen monitoring system isolation valves,
and ...
 - B) Description of the procedures used for operator action to reset the Standby Gas Treatment System, Torus Vacuum Breaker Valves and Secondary Containment Isolation Valves initiation/isolation logics.
- A) The control circuits for the hydrogen and oxygen monitoring system isolation valves are being modified as part of a system upgrade required by NUREG 0737. The revised control circuits include "reset" protection that requires that all valve control switches be moved to CLOSE before the isolation logics can be reset. This is accomplished by wiring contacts (closed only when switch is in CLOSE position) of all applicable valve control switches in series with the RESET control switch.

Due to system requirements these isolation valves must be opened after an accident; therefore, an override capability has been provided. Protection similar to that described above for isolation logic reset, is also provided in the override circuit to prevent the inadvertant opening of valves when overriding an isolation signal.

- B. The Standby Gas Treatment System, Torus Vacuum Breaker Valves and the Secondary Containment Isolation Valves will not be modified as it is BECo's contention that the following modifications will satisfy the second part of the Question 2 in the Ref. a) telephone memo.

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1. The installation of keylocked reset switches to replace the push-button reset switches on Panel C7.
2. The installation of a permanently installed nameplate next to the two reset switches telling the operator to position the valves for the above mentioned systems to their emergency position before activation of the Isolation logic reset.
3. Respective operation procedures changed to reflect these changes (Procedure No. 2.2.40 and No. 2.2.50).

Should you have any additional questions on this subject, please do not hesitate to contact us.

Very truly yours,

CW Morris