

MAY 10 1977

Docket #File
RSB Reading
NRR Reading
Mazetis Chron

50-346

MEMORANDUM FOR: Leon Engle, LPM, Light Water Reactor Br., #1, DPM
THRU: Thomas M. Novak, Chief, Reactor Systems Branch, DSS
FROM: Gerald R. Mazetis, Section Leader, Reactor Systems Branch, DSS
SUBJECT: DAVIS-BESSE 1 DH SYSTEM AUTOMATIC CLOSURE FEATURE

Per your request, RSB's evaluation of the recent submittal by the applicant (Letter fm. Lowell E. Roe to Mr. John F. Stolz dated May 2, 1977) is enclosed. This evaluation primarily addresses the Davis-Besse 1 overpressure protection during startup and shutdown. It should be noted that while specific criteria on the formulation of setpoints do not exist in RSB (instrument accuracy, setpoint tolerance, instrument drift, relief valve accumulation, etc.), it would be our observation that the applicant has considered such factors and that adequate margins exist in the auto closure setpoint determination.

Original Signed By

~~Signature~~
Gerald R. Mazetis, Section Leader
Reactor Systems Branch
Division of Systems Safety

Enclosure:
Evaluation

cc: A. Szukiewic
D. Ross
T. Novak
R. Frahm
S. Israel
J. Stolz

POOR
ORIGINAL

Contact:
G. Mazetis, NRR
x27341

OFFICE	DSS:RSB	DSS:RSB			
SURNAME	GMazetis:db	TNovak			
DATE	5/4/77	5/1/77			

DAVIS-BESSE 1

RSB EVALUATION OF OVERPRESSURE PROTECTION

Part (3)(0) of the Davis-Besse 1 facility license states that:

"Prior to entering Mode 2 (Startup), Toledo Edison Company shall submit for staff evaluation and subsequently implement the necessary modifications to ensure that the decay heat removal relief valve will actuate prior to automatic closure of the decay heat removal system isolation valves."

The intent of the above requirement is to provide additional confidence that an overpressure event on the primary side would be limited in magnitude. Although sufficient vessel brittle fracture margin exists for the first fuel cycle (see SER Supplement 1: Section 5.2.2), the availability of the DH relief valve provides even further assurance that an overpressure event during startup or shutdown would be of no safety consequence.

In a letter dated May 2, 1977, the applicant stated that the automatic closure setpoint of the DH isolation valves DH-11 and DH-12 is being raised to incorporate at least a ΔP of 93 psi above the DH relief valve setpoint of 320 psig. We judge that this value will provide adequate assurance that the decay heat removal relief valve will actuate prior to automatic closure of the decay heat removal isolation valves.

In addition, we note that the applicant has committed to maintain power to DH-11 and DH-12 when the decay heat removal system is in operation and to use only one decay heat removal pump at a time. These commitments are in accordance with our SER Supplement and are acceptable to the staff.