

VIRGINIA ELECTRIC AND POWER COMPANY

RICHMOND, VIRGINIA 23261

July 14, 1980

Mr. Harold R. Denton, Director
Office of Nuclear Reactor Regulation
Attention: Mr. B. Joe Youngblood, Chief
Licensing Branch No. 1
Division of Licensing
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Serial Number 620
NO/ERSjr/sj1
Docket No. 50-339
License No. NPF-7

Dear Mr. Denton:

RESIDUAL HEAT REMOVAL (RHR)
ADDITIONAL INFORMATION
NORTH ANNA POWER STATION UNIT NO. 2

Members of your staff have requested additional information concerning the Residual Heat Removal (RHR) system for North Anna Unit No. 2.

In previous correspondence, we have addressed the use of auxiliary pressurizer spray including the use of a portable supply of motive power. Auxiliary spray is actuated by an air operated valve and connects to the charging line of the Chemical and Volume Control System. The motive force for this system is charging pumps powered by the emergency busses.

We have further determined that the pressurizer power-operated relief valve (PORV) could be used for pressure reduction of the reactor coolant system, if required. The PORV discharges to the pressurizer relief tank (PRT). The PRT contains rupture discs and this tank is designed for a range of pressure from full vacuum to 100 psig. The tank is equipped with the following instrumentation (and alarms):

Level	High alarm at 78%
Pressure	High alarm at 8 psig
Temperature	High alarm at 112°F

We have in the past experienced failed (blown) rupture discs. These events have not caused (from our observations) extreme containment environments, except for higher than normal airborne activity. Personnel have entered containment for detailed walkdowns after such events. They were not subjected to extreme conditions; however, they were required to wear self-contained breathing apparatus to protect against possible airborne contaminants.

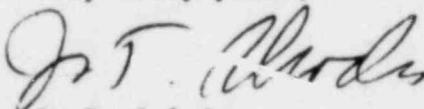
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Use of the PORV as an alternate method of pressure reduction is a controlled process. The PORV is opened manually from the control room. It discharges underwater in the PRT. An operator performing this task can monitor the process and stop the discharge when required. He would then drain and/or vent as required to return the PRT to a normal status. He may refill, if necessary, with primary grade water. This is not a complicated process and can be accomplished with full confidence. The facility could be cooled down and depressurized in a controlled, step-wise fashion; i.e., first, reducing temperature; then reducing pressure. The PRT rupture discs would not be expected to fail because of use of the PORV's.

We fully believe that reactor coolant system cooldown and depressurization can be accomplished by alternate methods. In order to improve guidance to operators when using the PORV for pressure reduction, we will add a precaution to appropriate procedures to warn of potential failure of the PRT rupture disc.

This information should permit you to conclude your review of this item. Should you have any further questions, please contact us.

Very truly yours,


B. R. Sylvia
Manager
Nuclear Operations & Maintenance

cc: Mr. James P. O'Reilly