VIRGINIA ELECTRIC AND POWER COMPANY
RICHMOND, VIRGINIA 23261

W. L. STEWART
VICE PRESIDENT
NUCLEAR OPERATIONS

May 27, 1983

Mr. Harold R. Denton, Director
Office of Nuclear Reactor Regulation
Attn: Mr. Robert A. Clark, Chief
Operating Reactors Branch No. 3
Division of Licensing
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Serial No. 257A
NO/SBE/JHL:acm
Docket No. 50-339
License No. NPF-7

Gentlemen:

VIRGINIA ELECTRIC AND POWER COMPANY
NORTH ANNA POWER STATION UNIT NO. 2
STATUS OF LICENSE CONDITION 2.C(4)(c)

In our letter dated May 6, 1983 (Serial No. 257), we reported the status of North Anna Unit 2 License Condition 2.C(4)(c) which requires the replacement of the wide and narrow range resistance temperature detectors (RTD's) in the reactor coolant system with qualified RTD's. In the letter, it was stated that qualified RTD's had been obtained and installed in 23 of 24 locations in the reactor coolant system. The last RTD (TE-2430) could not be replaced at the time due to an obstruction. These qualified RTD's are Weed Instrument Company narrow range (200 ohm platinum single element) Model No. N9000-2B-240 and wide range (200 ohm platinum dual element) with sensor element SP612D-2B-C-6-F-13.5-0-0.

This letter is to inform you that the narrow range RTD's that were installed to meet this license condition have failed to operate properly. The failures were identified during bench testing or after installation while operating at a temperature between 195°F and 350°F. The failure mechanisms are still under investigation. The wide range RTD's are of a different design and experienced no such failures after installation.

Due to these failures, all of the narrow range RTD's (18 total) have been replaced. Vepco has located and installed 18 Rosemount RTD's (Model 176KF) that have not been used. These units have been installed and tested by the approved calibration and post installation testing procedures.

In addition, until the replaced RTD's can be repaired or redesigned to ensure the needed reliability is obtained or another qualified RTD can be obtained, the installed Rosemount RTD's will be tested by the Arrhenius methodology and also by the Loop Current Step Response method each calendar quarter. Vepco has assured that the cable connectors are adequately sealed. Therefore, the interim License Condition is being met.

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Vepco has determined that these failures could create a Substantial Safety Hazard in a Basic Component and this is reportable pursuant to 10 CFR Part 21. The initial verbal notification of this event was made to Mr. C. Julian (NRC Region II) at 1356 on May 24, 1983. A follow-up written report will follow within five days.

Very truly yours,

W. L. Stewart

cc: Mr. James P. O'Reilly
Regional Administrator
Region II

Mr. M. B. Shymlock
NRC Resident Inspector
North Anna Power Station