Central File

VIRGINIA ELECTRIC AND POWER COMPANY
RICHMOND, VIRGINIA 23261

80 JUN 12 A 9: 02

June 9, 1980

Mr. James P. O'Reilly, Director
Office of Inspection and Enforcement
U. S. Nuclear Regulatory Commission
Region II
101 Marietta Street, Suite 3100
Atlanta, Georgia 30303

Serial No. 223/031080
NO/RMT:ms
Docket Nos. 50-280
50-281
50-338
50-339
License Nos. DPR-32
DPR-37
NPF-4
NPF-7

IE BULLETIN 80-05

Dear Mr. O'Reilly:

This is in response to IE Bulletin 80-05, "Vacuum Condition Resulting in Damage to Chemical Volume Control System (CVCS) Holdup Tanks". Our responses for Surry Power Station Unit Nos. 1 and 2 and North Anna Power Station Unit Nos. 1 and 2 are attached.

Very truly yours,

B. R. Sylvia
Manager-Nuclear Operations
and Maintenance

Attachment

cc: Director, NRC Office of Inspection and Enforcement
Washington, D. C. 20555

OFFICIAL COPY

8006240238 Q

RESPONSE TO IE BULLETIN NO. 80-05
NORTH ANNA POWER STATION UNITS 1 AND 2

Pursuant to IE Bulletin No. 80-05 "Vacuum Condition Resulting in Damage to Chemical Volume Control System (CVCS) Holdup Tanks (sometimes called "Clean Waste Receiver Tanks")", dated March 10, 1980, a review of the Reactor Coolant, Boron Recovery, Chemical Volume Control, Liquid Waste, and Vent and Drain Systems has been performed to assure that adequate measures have been taken to protect low pressure or holdup tanks that could be valved to contain primary system water or could receive primary system water due to overflow against vacuum conditions. Two potential problem areas were identified, the Boron Evaporator Bottoms Tank and the Boric Acid Storage Tanks. The corrective actions that will be taken are described in the following review results.

I. Chemical Volume Control System

A. Volume Control Tanks (1-CH-TK-2 and 2-CH-TK-2)

The Volume Control Tank pressure and temperature are monitored with indication given in the Main Control Room. Alarm is given in the Main Control Room for high and low pressure conditions. The tanks are provided with a remote operated solenoid valve backed up by a pressure control valve which ensures that the pressure does not fall below minimum operating pressure during degassing to the Waste Disposal System. The tanks are normally maintained between 20 to 50% indicated level with a H_2 blanket maintained between 15 and 60 psig. A pressure control valve automatically opens and supplies H_2 to prevent the tank from falling below minimum operating pressure. Suction from the tank is isolated at 5% indicated level. Drawing a vacuum in the tank is precluded by automatic actions. The Volume Control Tanks normally contain filtered demineralized primary system water. The Volume Control Tanks are located in the Auxiliary Building.

B. Boric Acid Storage Tanks (1-CH-TK-1A, 1-CH-TK-1B, and 1-CH-TK-1C)

The Boric Acid Storage Tanks are vented to the Gaseous Waste System. Since the vents can be manually closed, the vent isolation valves will be locked open and administratively controlled within 30 days of this response. The Boric Acid Storage Tank normally contains highly borated, very low activity water. The Boric Acid Storage Tanks receive water from either the Boric Acid System Evaporator Bottoms Tank or the Boric Acid Batch Tank. The Boric Acid Storage Tanks are located in the Auxiliary Building.

at the grade level south of the Fuel Building. Natural circulation heaters are provided to prevent freezing of the tanks. Steam for the heaters is provided from the primary plant auxiliary steam system. The tanks normally receive water from the Boron Recovery Test Tanks after purity has been established or, when required, demineralized water from the flash evaporator.

III. Liquid Waste System

A. High Level Waste Drain Tanks (1-LW-TK-2A and 1-LW-TK-2B)

The High Level Waste Drain Tanks are vented to the Low Level Waste Drain Tanks. The vent line has one isolation valve which is administratively controlled and is locked in the open position. The Low Level Liquid Waste Tanks are vented to atmosphere via a non-isolable vent. The High Level Waste Tanks are also vented to the process vent blower suction, thus continually purging any liberated hydrogen or radioactive gasses. The tanks normally contain a mixture of contaminated water from various sources. The tanks are located in the Auxiliary Building.

B. Low Level Waste Drain Tanks (1-LW-TK-3A and 1-LW-TK-3B)

The Low Level Waste Tanks are vented to atmosphere via a non-isolable vent. The tanks are also vented to the process vent blower suction, thus continually purging any liberated radioactive gases. The tanks are located in the Auxiliary Building.

IV. Vent and Drain System

A. Primary Drain Transfer Tanks (1-DG-TK-1 and 2-DG-TK-1)

The Primary Drain Transfer Tanks are designed for full vacuum conditions. The tanks normally contain primary system leakage. The tanks are located in Unit 1 and Unit 2 containment building.

V. Reactor Coolant System

A. Pressurizer Relief Tanks (1-RC-TK-2 and 2-RC-TK-2)

The Pressurizer Relief Tanks and rupture discs holders are designed for full vacuum. The tanks normally contain relieved primary system water in a predominantly nitrogen atmosphere. The tanks are located in Unit 1 and Unit 2 containment buildings.