

TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401

5th 157th Lookout Place

JAN 31 6 2:30

January 31, 1986

WBRD-50-391/86-01

U.S. Nuclear Regulatory Commission
Region II
Attention: Dr. J. Nelson Grace, Regional Administrator
101 Marietta Street, NW, Suite 2900
Atlanta, Georgia 30323

Dear Dr. Grace:

WATTS BAR NUCLEAR PLANT UNIT 2 - OVERPRESSURIZATION OF THE VOLUME CONTROL
TANK - WBRD-50-391/86-01 - REVISED INTERIM REPORT

The subject deficiency was initially reported to NRC-OIE Inspector
Al Ignatonis on November 20, 1985 in accordance with 10 CFR 50.55(e) as NCR
WBN 6379. Enclosed is our revised interim report. We expect to submit our
next report on or about February 28, 1986.

In our interim report, dated January 10, 1986, we erroneously reported that
the Volume Control Tank exhibited visible bulging. This revised interim
report has deleted that statement.

If there are any questions, please get in touch with R. H. Shell at
FTS 858-2688.

Very truly yours,

TENNESSEE VALLEY AUTHORITY

R. Gridley
by RLS

R. L. Gridley
Manager of Licensing

Enclosure

cc: Mr. James Taylor, Director (Enclosure)
Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Records Center (Enclosure)
Institute of Nuclear Power Operations
1100 Circle 75 Parkway, Suite 1500
Atlanta, Georgia 30339

8602200046 860131
PDR ADOCK 05000291
8 PDR

ENCLOSURE

WATTS BAR NUCLEAR PLANT UNIT 2
OVERPRESSURIZATION OF THE VOLUME CONTROL TANK
WTRD-50-391/66-01
NCR WBN 6379
10 CFR 50.55(e)
REVISED INTERIM REPORT

Description of Deficiency

The chemical and volume control system (CVCS) volume control tank (VCT) was overpressurized during flushing operations of the CVCS piping associated with test packages 2-062-436-099 and -100. The design pressure of the VCT is 75 lb/in² and the ASME hydro test pressure is 124 lb/in². The worst condition occurred with the VCT being supplied flow through valve 2-62-LCV-132 using the residual heat removal (RHR) pump (discharge pressure of approximately 220 lb/in²) and relieving through valve 2-62-683 (see attached sketch for clarity).

A similar deficiency occurred during a hydrostatic test of the unit 1 VCT which was reported under 10 CFR 50.55(e) nonconformance report (NCR) 3877. This condition resulted in pressures of 270 lb/in² to the VCT. After evaluation and inspection by Westinghouse, the component supplier, it was determined that the VCT was acceptable to use as-is. The action to prevent recurrence of the unit 1 deficiency involved modifications to the hydrostatic test procedure. The unit 2 deficiency did not occur in conjunction with hydrostatic testing.

The root cause of this deficiency is inadequate procedures. The Watts Bar Nuclear Plant (WBN) procedure governing flushing and cleaning of piping systems, WBN Quality Control Test (QCT) 4.36, does not adequately address reviewing for limiting components in a system based on anticipated flushing pressures. Overpressurization could potentially have occurred during previous flushing operations using this procedure if the discharge pressure exceeded the design pressure of the system or components involved.

Safety Implications

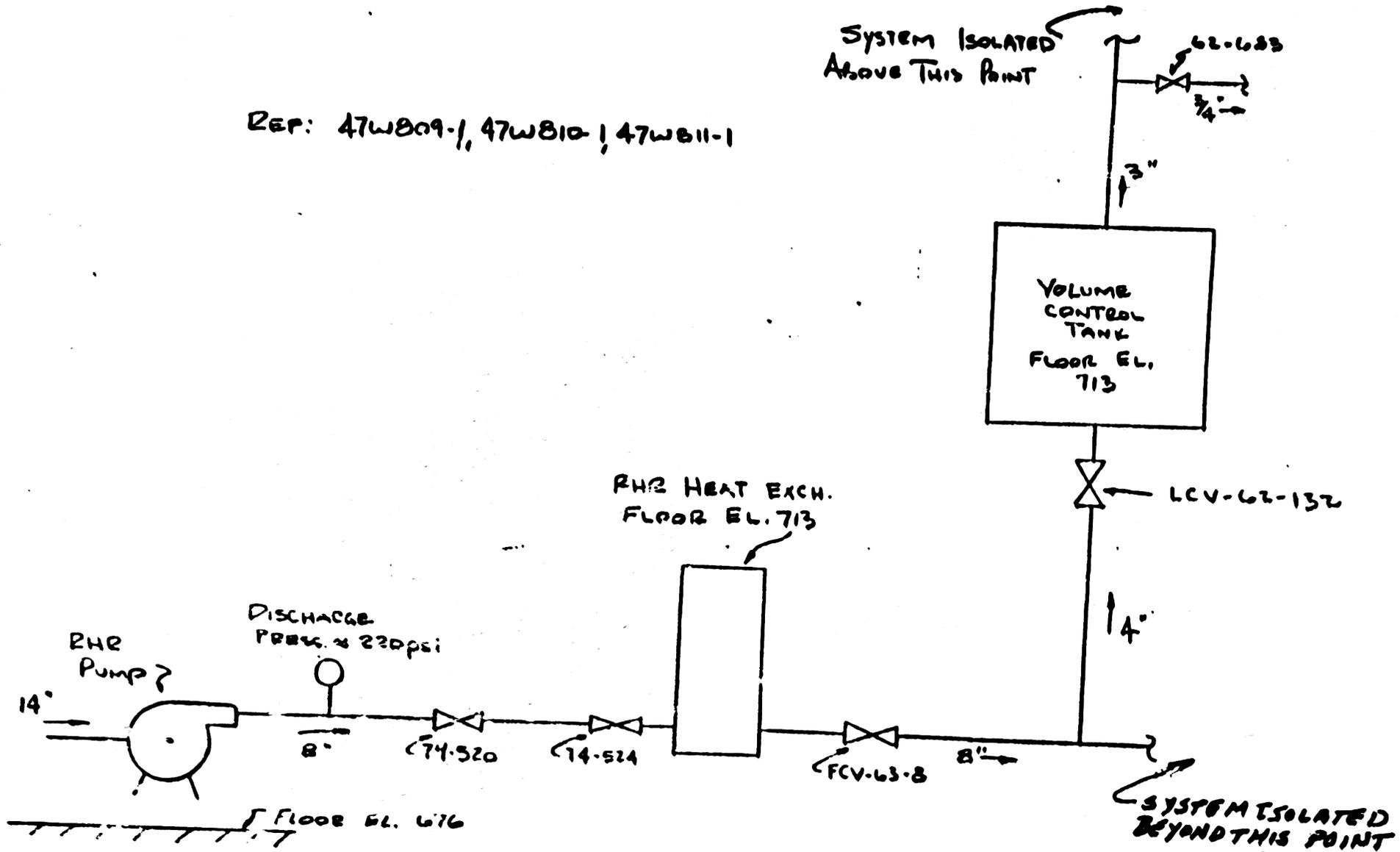
The CVCS VCT is an essential component for plant startup and/or safe shutdown. The overpressurization which occurred during the flushing operations could result in failure of the VCT. Failure of the VCT could result in degradation of the CVCS. The loss of this system function could adversely affect the safe operation of the plant.

Interim Progress

TVA is still in the process of determining the impact of the damage to the VCT and evaluating all previous flushing operations using this procedure. After all inspections and tests are completed, TVA will provide the results of the evaluations to the NRC in a final report by February 28, 1986.

In order to prevent recurrence, WBN QCT 4.36 flushing procedure will be revised as necessary to incorporate a review for limiting components based on anticipated flushing pressures.

REF: 47W809-1, 47W810-1, 47W811-1



WBND
UNIT #2
NCR # 6379