

TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401

400 Chestnut Street Tower II

December 28, 1983

BLRD-50-438/83-63

BLRD-50-439/83-57

U.S. Nuclear Regulatory Commission
Region II

Attn: Mr. James P. O'Reilly, Regional Administrator
101 Marietta Street, Suite 3100
Atlanta, Georgia 30303

Dear Mr. O'Reilly:

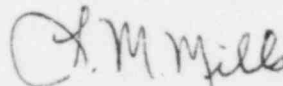
BELLEFONTE NUCLEAR PLANT UNITS 1 AND 2 - ORIENTATION OF ASCO SOLENOID -
OPERATED VALVES - BLRD-50-438/83-63, BLRD-50-439/83-57 - FIRST INTERIM
REPORT

The subject deficiency was initially reported to NRC-OIE Inspector
Linda Watson on November 30, 1983 in accordance with 10 CFR 50.55(e) as
NCR 2551. Enclosed is our first interim report. We expect to submit our
next report by October 19, 1984.

If you have any questions concerning this matter, please get in touch with
R. H. Shell at FTS 858-2688.

Very truly yours,

TENNESSEE VALLEY AUTHORITY



L. M. Mills, Manager
Nuclear Licensing

Enclosure

cc: Mr. Richard C. DeYoung, 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

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ENCLOSURE

BELLEFONTE NUCLEAR PLANT UNITS 1 AND 2
ORIENTATION OF ASCO SOLENOID-OPERATED VALVES
NCR 2551
10 CFR 50.55(e) REPORT
BLRD-50-438/83-63, BLRD 50-439/83-57
FIRST INTERIM REPORT

Description of Deficiency

Pilot solenoid valves are used in the air line to a pneumatic control valve air diaphragm for the purpose of relieving the pressure on the diaphragm to allow a spring to force the control valve to its failure mode.

The solenoids are normally mounted on the control valve by the control valve manufacturer. Certain solenoid models manufactured by the Automatic Switch Company (ASCO) require a specific mounting orientation to assure correct operation. Several valves were found installed at Bellefonte with the solenoids not oriented in the required position. Specifically, the control valve manufacturer (Copes Vulcan, Incorporated) had assumed the control valve would be installed in the piping with its diaphragm actuator vertical and oriented the solenoid for this installation. Unfortunately, due to surrounding hardware interferences, some of the control valves could not be installed with their actuators vertical but instead were installed with the actuators horizontal. As a consequence, the solenoids are not oriented to permit proper operation.

Interim Progress

TVA considers that this problem is potentially generic to other safety-related valves furnished by other manufacturers to TVA at Bellefonte. Therefore, the first step to be taken will be a review of all safety-related pneumatic control valves with pilot solenoids to determine which control valves have ASCO solenoid models with orientation limitations. The second step will be to compare the manufacturer's control valve drawings with the mechanical piping drawings (which show valve orientation) to determine which control valves (and hence the solenoids) are oriented in an unacceptable manner. The final step will be correction of the problem areas by either designing a solenoid mounting bracket that will orient the solenoid in the correct position with the control valve left installed as is or by rotating the control valve in relation to the piping to place the solenoid back in an acceptable position. An Engineering Change Notice will be prepared to revise all appropriate drawings once the review is complete and all unacceptable installations identified.