

TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401

400 Chestnut Street Tower II

84 JUN 25 P12:42

June 22, 1984

BLRD-50-438/84-26

BLRD-50-439/84-25

U.S. Nuclear Regulatory Commission
Region II

Attn: Mr. James P. O'Reilly, Regional Administrator
101 Marietta Street, NW, Suite 2900
Atlanta, Georgia 30323

Dear Mr. O'Reilly:

BELLEFONTE NUCLEAR PLANTS UNITS 1 AND 2 - SHRINKAGE/SPLITS IN DOW CORNING
FOAM PENETRATION SEALS BLRD-50-438/84-26, BLRD-50-439/84-25 - FINAL REPORT

The subject deficiency was initially reported to NRC-OIE Inspector
P. E. Fredrickson on March 19, 1984 in accordance with 10 CFR 50.55(e) as
NCR 2927. This was followed by our interim report dated April 17, 1984.
Enclosed is our final report.

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

Very truly yours,

TENNESSEE VALLEY AUTHORITY

L. M. Mills

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 PLANTS UNITS 1 AND 2
SHRINKAGE/SPLITS IN DOW CORNING FOAM PENETRATION SEALS
BLRD-50-438/84-26, BLRD-50-439/84-25
NCR 2927
10 CFR 50.55(e)
FINAL REPORT

Description of Deficiency

Bus penetrations located in Diesel Generator Building Units 1 and 2 were reinspected due to the fact that after an extended period of time, shrinkage and splits have occurred in the larger penetration seals. These penetrations were reinspected to assure room temperature vulcanizing (RTV) foam firestops were still in compliance with Bellefonte Quality Control Procedure (BNP-QCP) 5.18, "Firestops, Waterstops, and Pressure Seals." There are eight bus penetrations in each unit. A total of seven penetrations were reinspected in both units and two penetrations in unit 1 and two in unit 2 had excessive splits and shrinkage. Subsequent reinspection of the remaining nine seals in the DG buildings revealed splits in three seals and shrinkage in six seals. Nonconformance report (NCR) 2927 has been revised to include the results of all 16 bus penetration seal inspections.

In addition to reinspection in the DG buildings, four RTV foam seals were reinspected in the Auxiliary Building. Two of the seals had excessive shrinkage.

Dow Corning informed TVA that the splits are due to shrinkage which normally occurs during the curing process. The volume of the foam will typically decrease 1 percent for each 18°F decrease in ambient temperature.

Safety Implications

The subject foam seals perform a secondary safety function in that they are intended to impede the spread of a fire which could jeopardize safety-related components. If this condition had remained uncorrected, it could have adversely affected the safety of operations of the plant.

Corrective Action

Dow Corning has advised TVA that the seals may be repaired by adding more foam to the seal. Therefore, TVA will repair the penetrations in accordance with the manufacturer's instructions and BNP-QCP 5.18.

BNP-QCP 5.18 is being revised to require periodic seal inspections until it can be confirmed that temperature changes will not affect them.

All corrective actions will be complete by January 11, 1985.