

TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401
400 Chestnut Street Tower II

April 1, 1983

BLRD-50-438/82-73
BLRD-50-439/82-67

U.S. Nuclear Regulatory Commission
Region II
Attn: Mr. James P. O'Reilly, Regional Administrator
101 Marietta Street, NW, Suite 2900
Atlanta, Georgia 30303

Dear Mr. O'Reilly:

BELLEFONTE NUCLEAR PLANT UNITS 1 AND 2 - FINS AND HEADS ON STAR MODEL QE
SPRINKLER HEADS - SECOND INTERIM REPORT

The subject deficiency was initially reported to NRC-OIE Inspector R. V. Crlenjak on October 26, 1982 in accordance with 10 CFR 50.55(e) as NCR BLN MEB 8208. Enclosed is our second interim report. For disposition purposes, NCRs BLN MEB 8208 and WBN MEB 8204 are now being handled independently. Therefore, a separate interim report will be submitted for WBN MEB 8204. We expect to submit our next report on or about December 5, 1983.

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
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
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Atlanta, Georgia 30339

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ENCLOSURE

BELLEFONTE NUCLEAR PLANT UNITS 1 AND 2
FINS AND HEADS ON STAR MODEL QE SPRINKLER HEADS
NCR BLN MEB 8208
BLRD-50-438/82-73, BLRD-50-439/82-67
10 CFR 50.55(e)
SECOND INTERIM REPORT

Description of Deficiency

Star Model QE sprinkler heads have been used in fire suppression systems located in various areas of the plant. Two problems associated with the heat collecting fins on these heads have been brought to TVA's attention by Factory Mutual Research Corporation. First, the fins can be easily bent preventing the heads from opening during a fire. The upright sprinkler heads are more susceptible to this type of failure than pendant heads. Second, the center strut on the heads corrode at the mounting point for the heat collecting fins. This produces an insulating effect which can change the head's temperature setpoint and operating time.

Factory Mutual Research Corporation has also retracted their approval of the Star Model QE sprinkler heads on the basis of these problems and has recommended that they be replaced.

Interim Progress

Star model QE sprinkler heads will be replaced in all areas of the plant with Star model H sprinkler heads or the equivalent. The replacement will be accomplished under Engineering Change Notice (ECN) 1728.

Since only a few of the model QE heads have been installed at Bellefonte to date, their replacements will be largely installed during the normal course of sprinkler system construction. All replacement heads will be in place before the fuel loading of the respective unit into which the sprinkler system is to be installed. TVA's final report will specify the schedule for these replacements.

A final report on this subject will be submitted on December 5, 1983, upon closure of ECN 1728 and the release of the procurement documents for the replacement sprinkler heads.