TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401
400 Chestnut Street Tower II

March 29, 1983

WBRD-50-390/82-112
WBRD-50-391/82-105

83 MAR 31 A9:40

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:

WATTS BAR 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 NCRs BLN MEB 8208 and WBN MEB 8204. Our first interim report was submitted on November 29, 1982. Enclosed is our second interim report for NCR WBN MEB 8204. We expect to submit our next report on or about October 3, 1983.

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 BLN MEB 8208.

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

OFFICIAL COPY

8304050248 830329
PDR ADOCK 05000390
S PDR

IE 27

ENCLOSURE

WATTS BAR NUCLEAR PLANT UNITS 1 AND 2
FINS AND HEADS ON STAR MODEL QE SPRINKLER HEADS
WBN MEB 8204
WBRD-50-390/82-112, WBRD-50-391/82-105
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

Our previous report stated that our proposed disposition was to replace all Star Model QE sprinkle heads at Watts Bar Nuclear Plant. Because of economic considerations (large labor costs) associated with this commitment, TVA has decided to make further evaluations on possible alternate solutions. The evaluations will include sample testing by Factory Mutual Research Corporation to determine the actual severity of sprinkler head problems.