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AUG 31 1992

WBRD-50-390/92-08
WBRD-50-391/92-08

10 CFR 50.55(e)

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D.C. 20555

Gentlemen:

In the Matter of the Application of)
Tennessee Valley Authority)

Docket Nos. 50-390
50-391

WATTS BAR NUCLEAR PLANT (WBN) UNITS 1 AND 2 - MISCLASSIFICATION OF QUALITY
ASSURANCE LEVEL III MATERIAL - WBRD-50-390/92-08 AND WBRD-50-391/92-08 -
FINAL REPORT

The subject deficiency was initially reported to NRC Region II on
July 31, 1992, in accordance with 10 CFR 50.55(e) as Incident
Investigation Report II-W-92-008. Enclosed is TVA's final report on this
subject.

If there are any questions, please telephone P. L. Pace at (615) 365-1824.

Very truly yours,

William J. Museler

Enclosure

cc: See page 2

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cc (Enclosure):

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ENCLOSURE

WATTS BAR NUCLEAR PLANT (WBN) UNITS 1 AND 2
UNSANITIZED QUALITY ASSURANCE LEVEL III MATERIAL
INCIDENT INVESTIGATION II-W-92-008
WBRD-50-390/92-08 AND WBRD-50-391/92-08
FINAL REPORT

Description of Condition

As part of the corrective actions associated with NRC violations identified in Inspection Report 92-03, TVA identified five material issuances that had incorrect safety classifications for the intended quality applications. Four of these issuances were the result of misclassifications by engineering and one was caused by materials personnel mishandling.

The materials process at WBN requires first that the quality levels for stocked items, assigned by the Procurement Engineering Group, be based on the highest known end usage for that item. Second, the end user is required during the material request process to know the applicable work documents, the end use unit identification or equipment, and the end use classification (quality related, 50.49). The material issuer then performs an administrative review to ensure that there is an exact quality level match between the material request form, the material tag, the material tracking system, and also ensures that the descriptions on the same three indicators are in general agreement.

Specifically during a review of 1557 nonsafety-related classified issuances for quality applications which were made from June 5, 1991 to November 7, 1991, the following items were issued with incorrect safety classifications:

| <u>TIIC No.</u> | <u>Description</u> | <u>Host Component</u> |
|-----------------|--|--|
| ADN-289E | Illuminated Push Button (2 issued) | ERCW Flow Control Valve Local Switches |
| BPL-195W | Breaker Spring Charging Motor | 6.9 KV Breaker |
| BJM-285M | Pump Vane | Containment Purge Air Exhaust Monitor |
| ARC-848D | Terminal Lug (4 issued) | Electrical Board Room Chiller (air conditioning) |
| ARW-777N | Check Valve | Standby Diesel Generator Oil Line |

The causes of the above 4 misclassifications and 1 mishandling can be attributed to several factors. Primarily, the existing system relies too heavily on engineering reviews and does not place enough responsibility for material selection in the hands of the part user. Sufficient tools and guidance have not been provided to enable the user to successfully accomplish this task. High workload, difficulty in classifying some specific items, and inadequate file maintenance were identified as additional causes.

This issue was initially identified on June 3, 1992. In accordance with 10 CFR 50.55(e), this item was determined to be reportable on July 31, 1992, and the NRC Operations Center was notified on that date.

SAFETY IMPLICATIONS

Each of the five deficient items were evaluated for acceptability. Two of the items were determined to be acceptable based on additional engineering evaluation and dedication of the items (TIIC Nos. ADN-289E and BPL-195W). Another item has been dedicated but must undergo post installation testing before it is determined fully acceptable (TIIC No. BJM-285M). The deficiencies noted for these three items would not have resulted in a failure. For the remaining two items, there was insufficient documentation to demonstrate that the safety functional requirements were adequately addressed. The safety significance of these two items were as follows:

TIIC No. ARC-848D

Four nonsafety-related terminal lugs were issued on July 1, 1991, and installed in the Electrical Board Room chiller control circuits. Failure of this function would have resulted in loss of the Electrical Board Room air conditioning, thereby reducing the plant's safe shutdown and accident mitigation capability.

TIIC No. ARN-777N

A nonsafety-related swing check valve was issued on August 13, 1991, and installed on the Standby Diesel Generator AC lube oil pump discharge. Failure of this function would potentially have resulted in loss of pressure in the lube oil system which reduces the lubricating and cooling capability of the standby diesel generator engine, thereby reducing the plant's safe shutdown and accident mitigation capability.

Although there is no reason to suspect deficient material of any kind, safety-related items require documentation demonstrating safety function performance. Material classified as nonsafety-related in a safety-related application would not provide the necessary supporting basis for its functional requirements.

CORRECTIVE ACTIONS

1. TVA will install qualified replacement terminal lugs in the Electrical Board Room chiller before system completion and transfer of the associated host equipment (System 31) for Unit 1 startup testing.
2. TVA will install a qualified replacement check valve in the Standby Diesel Generator before system completion and transfer of the associated host equipment (System 82) for Unit 1 startup testing.
3. TVA will establish and implement a plan for providing design basis guidelines for Maintenance and Modifications organizations for proper material selection and requirements for specific end-use applications by November 18, 1992.
4. Based on the very low misclassification rate (4 of 1557), further corrective action to address the specific contributing factors was not considered necessary. However, the subject incident investigation report was required to be read by engineers from the Materials Improvement Program, Replacement Items Project, and Procurement Engineering Group. This action was completed August 20, 1992. The single instance of mishandled material by materials personnel does not require corrective actions beyond those established previously under the Materials Improvement Program.