

# TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401

500A Chestnut Street Tower II

85 JAN 22 PJ: 55  
January 18, 1985

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:

TENNESSEE VALLEY AUTHORITY - BROWNS FERRY NUCLEAR PLANT UNITS 1, 2, AND 3 -  
DOCKET NOS. 50-259, -260, -296 - FACILITY OPERATING LICENSES DPR-33, DPR-52,  
AND DPR-68 - 10 CFR 21 REPORT

During the unit 3, cycle 5 outage, level switches for the CRD scram discharge volume tanks were installed. While this installation was ongoing plant personnel identified a problem associated with the mounting screws and nuts for the level switches. Different grade nuts and screws had been used for seismic mounting of the level switches. Upon further review, it was determined that unit 1 had the same problem. An analysis performed by TVA engineers determined the existing bolts as installed meet the specified design load requirements. However, a safety problem could develop if during maintenance the personnel were to torque the bolt to the value specified in plant instructions for the higher grade bolt that should have been installed. This would result in "overstressing" the associated nut, resulting in a possible failure mode. The bolting material on unit 3 has been replaced with ASTM A449 material. Work was completed July 30, 1984. Unit 1 bolting material will be replaced during the next scheduled outage, which is planned for June 1, 1985.

In the interim, action will be taken to ensure maintenance personnel are made aware of the torque requirements of the existing bolts. To avoid further occurrence of installation of incorrect mounting screws and nuts, appropriate plant personnel have been trained on identifying specified bolt material.

The bolting material used was supplied by the Unistrut Corporation through B & S Electric Supply Company. The bolting material supplied to TVA was not of the required grade, which resulted in the installation of different grade bolts and nuts. ASTM 307 bolting material was used instead of the specified ASTM A449 bolting material. The supplier, B & S Electric Supply Company, attested in an August 14, 1984 letter to TVA that the material shipped was correct. Further correspondence with the Unistrut Corporation identified the material in question: cap screw as grade 2 and the nut as ASTM A570 GR 33 material. The supplier and manufacturer of the bolts which were supplied to TVA in a "mixed grade" are as follows:

Supplier: B & S Electric Supply Company, Inc.  
610 Wendell Court  
Atlanta, Georgia 30336

Manufacturer: Unistrut Corporation  
Wayne, Michigan  
Unistrut part No. HHCS025150EG

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Mr. James P. O'Reilly

January 18, 1985

This problem is reportable under 10 CFR 21 and was reported to J. P. Darling (acting in my absence) on January 17, 1985. J. A. Domer of my staff made verbal notification to Dave Verrelli of your staff on January 17, 1985. The enclosed Part 21 report from Browns Ferry contains additional information on this matter.

Very truly yours,

TENNESSEE VALLEY AUTHORITY



H. G. Parris

Manager of Power and Engineering

Enclosure

EVALUATION LOGIC FOR PART 21

PROBLEM: Reference: CAR 84-052/DR 84-0166 (Mixed grades of bolts received)

IDENTIFIED BY: Quality Control Inspector

A. Does the problem involve:

1. Failure of goods and services to comply with applicable NRC requirements (regardless of whether these requirements are included in the procurement document). Yes  / No  / (If yes, go to D)
2. A procured basic component failure resulting in a condition or circumstance that could contribute to exceeding a safety limit as defined by plant technical specifications. Yes  / No  / (If yes, go to B)
3. Departure of a delivered component or service from the technical requirements of a procurement document. Delivery occurs upon acceptance by NUC PR (e.g., at receipt inspection). Yes  / No  / (If yes, go to B)

\*-----  
\* Answer all 3 questions above. If all "No's", GO TO C. If any "Yes's", GO TO "B."  
\*-----

B. Is component necessary to ensure:

1. The integrity of the reactor coolant pressure boundary Yes  / No  /
2. The capability to shut down the reactor and maintain it in a safe shutdown condition (example, IEEE Class 1E Electrical, Seismic cat. 1) Yes  / No  /
3. The capability to prevent or mitigate the consequences of accidents Yes  / No  /
4. Is security system deficiency involved? Yes  / No  /

\*-----  
\* If all "No's", GO TO C - If any "Yes's" - GO TO D  
\*-----

\* C. Evaluation for Services

1. If this is a repair service, would the item being repaired be procured as a "Commercial Grade" item? Yes  / No  /  
If "Yes", 10 CFR 21 does not apply, go to "E."  
If "No", go to C-2.
2. Could the service being procured cause a defect in a basic component or are the services connected with the design, inspection, testing, or consulting services important to safety that are associated with a basic component. If "Yes", 10 CFR 21 applies. Go to "E."  
If "No", 10 CFR 21 does not apply; go to "E."

\*-----  
\* D. Could the defect have caused a substantial safety hazard? Yes  / No  /  
(By definition, item A2 constitutes a substantial safety hazard.)  
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\* If "No", this item is not reportable - If yes, this item is reportable under Part 21.  
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\* E. Is this item reportable by NUC PR under Part 21? Yes  / No  /  
\*-----

\*Revision

EVALUATION LOGIC FOR PART 21 (Continued)

\* Submitted: George L. Clark /Date 12/5/84  
Reviewed: B. C. Main /~~12/12/84~~ <sup>on</sup> 1/13/85  
Compliance Staff Supervisor Date  
Approved: R. E. Sundell / 1/15/85  
PORC Chairman Date

cc: Compliance Supervisor

Retention: Period - Lifetime; Responsibility - Document Control Supervisor

NOTE TO PORC CHAIRMAN: This is a Part 21 (non LER). Special handling is required per BF 15.23. Return to Compliance for transmittal to Chatt.

