

TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401

400 Chestnut Street Tower II

November 5, 1982. 01

BLRD-50-438/82-70

BLRD-50-439/82-64

U.S. Nuclear Regulatory Commission  
Region II

Attn: Mr. James P. O'Reilly, Regional Administrator  
101 Marietta Street, Suite 3100  
Atlanta, Georgia 30303

Dear Mr. O'Reilly:

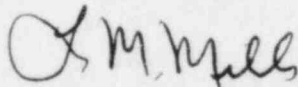
BELLEFONTE NUCLEAR PLANT UNITS 1 AND 2 - INSTALLATION OF MISCELLANEOUS  
STRUCTURAL STEEL - BLRD-50-438/82-70, BLRD-50-439/82-64 - FIRST INTERIM  
REPORT

The subject deficiency was initially reported to NRC-OIE Inspector  
R. V. Crlenjak on October 8, 1982 in accordance with 10 CFR 50.55(e) as  
Construction QA Audit BN-C-82-04, Deficiency #2. Enclosed is our first  
interim report. We expect to submit our next report by February 21, 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, 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

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## ENCLOSURE

BELLEFONTE NUCLEAR PLANT UNITS 1 AND 2  
INSTALLATION OF MISCELLANEOUS STRUCTURAL STEEL  
CONSTRUCTION QA AUDIT BN-C-82-04, DEFICIENCY #2  
BLRD-50-438/82-70, BLRD-50-439/82-64  
10 CFR 50.55(e)  
FIRST INTERIM REPORT

### Description of Deficiency

The subject deficiency deals with the inadequate fabrication/installation of miscellaneous structural steel. The examples cited in the audit are typical of work performed in earlier stages of the project. These deficiencies have come to light based on recent QC inspection of these installations. Earlier QC inspections were not performed because the installations were not complete. During the period of time that most of this structural steel was incorrectly fabricated/installed, indications are that appropriate procedures were not followed in obtaining TVA's Division of Engineering Design (EN DES) approval to deviate from the design drawings. Several reasons could be cited for the causes of this inadequate fabrication/installation. These include:

1. Lack of craft training emphasizing fabrication/installation in accordance with approved drawings.
2. Lack of craft training emphasizing appropriate steps to be taken when deviations from design drawings are required.
3. Lack of commitment for a quality fabrication/installation.
4. Lack of follow-through by the QC inspectors (field engineer) to coordinate necessary changes with EN DES after discussion of problems with the fabricating/installing craft.

It should also be noted that the majority of the miscellaneous steel has not been inspected and approved by QC inspectors. All of the cited examples were documented by QCIRs that QC inspectors initiated after finding the deficiency during their inspection.

### Interim Progress

Several specific items have changed within approximately the past three years to minimize future occurrences of this problem:

1. An extensive craft training program has been developed and implemented.
2. The field engineering section of the Office and Civil Engineering Unit (O&CEU) has been separated from the QC section.
3. Greater emphasis in following quality control procedures and approved design documents has been placed on Craft and O&CEU personnel.

In order to correct the existing problems, the following program has been initiated:

1. The Civil Engineering Supervisor and the Ironworker's Superintendent are jointly identifying areas of the plant in order to emphasize completion of all miscellaneous steel in these areas within a specific time frame. This work will include identification by O&CEU of all miscellaneous steel in the area to be worked.
2. Ironworker personnel will review/work/rework these features to ensure that they are installed per the design drawings.
3. Inspection of these features by QC personnel will follow and all deficiencies will be documented.
4. A trend analysis is being maintained by O&CEU to keep track of possible trends adverse to quality.