

TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401

July 20, 1977

50-438/439

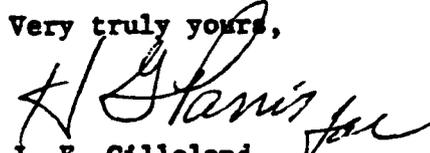
Mr. Norman C. Moseley, Director  
Office of Inspection and Enforcement  
U.S. Nuclear Regulatory Commission  
Region II - Suite 818  
230 Peachtree Street, NW.  
Atlanta, Georgia 30303

Dear Mr. Moseley:

BELLEFONTE NUCLEAR PLANT UNITS 1 AND 2 - CABLE TRAY SUPPORT  
SYSTEM - BNP-5

On April 7, 1977, L. E. Foster, Principal NRC Inspector for  
the Bellefonte Nuclear Plant, was informed that the subject  
nonconformance was determined to be reportable in accordance  
with 10 CFR 50.55(e). Our first interim report was dated  
May 9, 1977. Enclosed is our final written report.

Very truly yours,

  
J. E. Gilleland  
Assistant Manager of Power

Enclosure

cc: Dr. Ernst Volgenau, Director (Enclosure)  
Office of Inspection and Enforcement  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555

## ENCLOSURE

### BELLEFONTE NUCLEAR PLANT UNITS 1 AND 2

#### FINAL DESIGN REPORT NCR NO. BNP-5

#### CABLE TRAY SUPPORT SYSTEM

##### Description of Condition

The locations of dead load supports for cable tray fittings in a Category I structure were identified which do not comply with NEMA Standard VE 1-1971 as required in section 8.1 of Design Criteria N4-50-D728 nor was an analysis or test conducted as permitted in the referenced criteria. Drawing 4CW0941-X2-2R1 shows one 90 degree fitting location for one tray and drawing 4CW0941-X2-1R2 shows one 60 degree fitting location for a stack of two trays in which the dead load supports as required in section VE 1-5.05B of the above NEMA Standard have been omitted. In addition, drawings 4CW0942-X2-1R0 and 4CW0942-X2-2R1 show two opposite hand locations, one for each unit, in which trays have a straight run span between supports of 10 feet 5-1/2 inches. This condition does not comply with section 5.6.1 of Design Criteria N4-50-D728 which requires that straight runs of cable tray shall be supported at intervals not to exceed 8-foot clear span.

##### Analysis of Safety Implications

It has been determined that no safety-related cables were supported by the nonconforming portions of the cable tray support system. Based on an analysis of the trays and supports as they existed in their nonconforming conditions, the trays would have performed their design function under all postulated loading conditions without exceeding the allowable stresses. Had the nonconforming conditions gone undiscovered or uncorrected they could not have adversely affected the safe operation of the plant and therefore no longer constitute a reportable condition.

##### Corrective Action

On identification of the nonconforming conditions the affected design drawings were revised to require the addition of the omitted supports. The revisions were accomplished before installation of affected supports and cable trays. Also the importance of adhering to procedures, design criteria, and SAR requirements has been reemphasized to the design employees involved.

A review of all other issued cable tray support drawings in Category I structures show these supports to be in accordance with the applicable NEMA standards and TVA design criteria.

An investigation has been made to determine if the nonconforming conditions resulted from human error or if they represented a generic problem with OEDC's Quality Assurance Program. This investigation clearly indicated that the nonconforming conditions resulted from human error and that a generic problem does not exist.