

TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401

400 Chestnut Street Tower II

July 1, 1980

Mr. James P. O'Reilly, Director
Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
Region II - Suite 3100
101 Marietta Street
Atlanta, Georgia 30303

Dear Mr. O'Reilly:

BELLEFONTE NUCLEAR PLANT UNIT 1 - INFRACTION 50-438/80-06-01 -
FAILURE TO FOLLOW PROCEDURES ON THE INSTALLATION AND INSPECTION
OF SAFETY-RELATED CABLES - SUPPLEMENTAL INFORMATION

This is in response to C. E. Murphy's letter dated May 5, 1980,
RII:NM 50-438/80-06, 50-439/80-06, concerning activities at the
Bellefonte Nuclear Plant which appeared to have been in violation
of NRC regulations. Enclosed is a revision to our June 2, 1980,
response to the citation as discussed with T. E. Burdette on
June 26, 1980.

If you have any questions concerning this matter, please get in touch
with D. L. Lambert at FTS 857-2581.

Very truly yours,

TENNESSEE VALLEY AUTHORITY

L. M. Mills, Manager
Nuclear Regulation and Safety

Enclosure

cc: Mr. Victor Stello, Jr., Director (Enclosure) ✓
Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
Washington, DC 20555

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ENCLOSURE

BELLEFONTE NUCLEAR PLANT UNIT 1
REVISED RESPONSE TO NRC INFRACTION
FAILURE TO FOLLOW PROCEDURES ON THE INSTALLATION AND INSPECTION
OF SAFETY-RELATED CABLE

Infraction 50-438/80-06-01

As required by Criterion V of Appendix B to 10 CFR 50 and implemented by Bellefonte Nuclear Plant (BNP) Final Safety Analysis Report Section 17.1A.5, the appropriate instructions will be used for activities affecting quality. BNP-QCP-3.4, Revision 2 is the instruction utilized by BNP for the installation, inspection, preparation and documentation of insulated control signal and power cables. BNP-QCP-3.4 requires that cables be installed and terminated in accordance with Engineering Design (EN DES) computer data files and EN DES approved documents.

Contrary to the above, four safety-related cables were not installed in accordance with EN DES approved documents. The cables were as follows:

1. Cable number 1ND-ECA3-279-B was not terminated in panel 1EI-EMCC-67E4-B. QC records show this cable as being inspected and accepted.
2. Cable number 1ND-ECA3-349-B and 1ND-ECA3-343-B were not routed in the cable trays specified by their pull slips. Both cables were routed through node points AK6-AF94 which were not indicated on the pull slips. Also tray sections CJ74 and CJ73 were provided with a voltage divider which separated voltage levels V2 and V3. Tray sections CJ74 and CJ73 identified the front of the cable tray as voltage level V3 and the back of the cable tray as voltage level V2. Cable numbers 1NB-ECA3-349-B and the 1ND-ECA3-343-B were designated as V3 on the pull slips, but were routed in the V2 level in tray sections CJ74 and CJ73. These cables had been inspected and accepted by QC.
3. Cable number 1NC-ECA3-461-A was incorrectly terminated in panel 1EI-ELVS-24D3-A. The following shows the actual and required terminations.

| <u>Conductor Color</u> | <u>Actual Cable Termination</u> | <u>Required Cable Termination (Per Termination Slip)</u> |
|----------------------------|-------------------------------------|--|
| Black | D31-1 | D31-1 |
| White | D31-3 | D31-2 |
| Red | D31-6 | D31-6 |
| Green | D31-8 | D31-8 |

This cable had been inspected and accepted by QC.

Corrective Action Taken and Results Achieved

Quality Control Investigation Report (QCIR) No. 3619 was written to disposition the improperly routed cables 1ND-ECA3-343-B and 1ND-ECA3-349-B. A work release was written to rework conduit 1A3-6014-B to eliminate the chance of a misroute and the cables were reinstalled in accordance to the EN DES-approved route.

QCIR's 3543 and 3579 were written to disposition the improperly terminated cable 1NC-ECA3-461-A and disconnected cable 1ND-ECA3-279-B, respectively. Work releases were written to correctly reterminate the cables.

Steps Taken to Avoid Further Recurrence

The individual inspectors involved and all others certified to BNP-QCP-3.4 R2 will be made aware of the infraction, reminded of the requirements, and cautioned to be more diligent in their inspections. The electrical craft foremen will be instructed in BNP-QCP-10.6, "Work Release," so that unauthorized removal of a cable termination will be eliminated.

QCIR 3805 was written to reinspect 10 percent of the Class IE cables for correct routing and termination. Pending the results of this QCIR, further reinspection may be necessary. BNP-QCP-3.4 will be revised to reinspect Class IE cables for correct routing and termination on a random basis.

Date of Full Compliance

The items listed in the infraction were corrected by May 29, 1980. Reinstruction of inspectors and electrical craft foremen will be completed by July 18, 1980. The 10 percent reinspection required by QCIR 3805 will be completed by October 3, 1980. The revision to BNP-QCP-3.4 was in effect on June 27, 1980.