



July 5, 1990

Mr. Carl Berlinger, Branch Chief
Office of Generic Communications
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Subject: 10CFR Part 21 Report
ABB 27/59 Relays

Gentlemen:

This is a follow-up report to a Part 21 report sent to the NRC dated February 22, 1990 on the ABB 27/59 relays, wherein the solder connections from the wire wound resistors connecting to the printed wiring runs on the bottom of the circuit boards have deteriorated due to thermal stress.

In inspecting for the problem previously reported on the ABB 27/59 relay, Duquesne Light (Beaver Valley) discovered a similar problem with some of the Type 47 relays.

An ABB 47H relay, Catalog Number 211F0171 was returned for evaluation and it was determined that a similar problem existed.

Upon examination of the records, it was determined that types 47, 47D and 47H relays manufactured from March 1976 through late 1978 could be of this design. These units have catalog numbers 211F XXXX or 211N XXXX (where "X" is any digit).

Circuit boards with small solder pads for the wire wound power resistor lead connections are identified by one of the following numbers printed on the circuit board:

609928-001
609928-002
609928-003

Units with the above numbers should be replaced with new relays.

Units using circuit boards with the following identification numbers should be inspected and replaced if signs of overheating are present. These circuit boards have increased solder pad sizes, compared to the above listed units, however they are not up to the present design standards:

610364-001	610364-002
610310-002	610310-001
610310-003	

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Page 2

A list of ABB Type 47, 47D or 47H in nuclear applications with possible solder pad overheating problems is attached as Appendix "A". Copies of this report are being sent to Duquesne Light Company (Beaver Valley) and to TVA (Bellefonte).

E. W. Rhoads
Manager, Quality Assurance

EWR/jm



APPENDIX "A"

TYPE ABB (ITE) 47, 47D, OR 47H RELAYS IN NUCLEAR APPLICATIONS WITH POSSIBLE SOLDER-PAD OVERHEATING PROBLEM

The following relays may NOT all be Class 1E:

Duquesne Light Company - Beaver Valley Plant:

The following relays were shipped mostly for S.O. 33-50661 (but possibly on 50438, 50766):

Most of these shipments took place August 78 through October 78:

34-27984 (4) 211N0171, (2) 211N6171

34-27883 (2) 211N0271, (2) 211N6171, (4) 211N0171, (2)
211N4171

34-27881 (4) 211N4171

34-27880 (16) 211N0171

34-26918A (2) 211N6171, (4) 211N4171

Two Units were supplied to Systems Control Co. for Duquesne Light Beaver Valley:

34-33354 (2) 211N0171

TVA (Bellefonte)

The following relays were shipped for 33-51014 in June 78:

34-28685 (2) 211F4171

NOTE: The relays identified in this report are called ABB relays, however at the time of their manufacture they were identified with the name "ITE".