

Arizona Public Service Company

P.O. BOX 21666 • PHOENIX, ARIZONA 85036

November 28, 1983  
ANPP-28302-BSK/KCP

U. S. Nuclear Regulatory Commission  
Region V  
Creekside Oaks Office Park  
1450 Maria Lane - Suite 210  
Walnut Creek, CA 94596-5368

Attention: Mr. T. W. Bishop, Director  
Division of Resident  
Reactor Projects and Engineering Programs

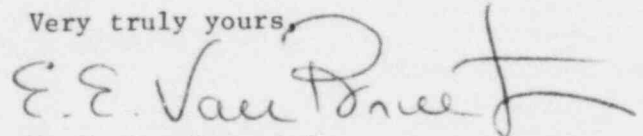
Subject: Final Report - DER 82-78  
A 50.55(e) Reportable Condition Relating to Improperly Crimped  
Termination Lugs In Control Panels For Water Chillers By  
Carrier Air Conditioning  
File: 83-019-026; D.4.33.2

Reference: A) Telephone Conversation between T. Young and J. Cook on  
December 17, 1982  
B) ANPP-22734, dated January 17, 1983 (Final Report)  
C) ANPP-23443, dated April 6, 1983 (Final Report - Rev. 1)  
D) ANPP-23759, dated May 16, 1983 (Final Report - Rev. 2)

Dear Sir:

Enclosed is revision three of the subject Deficiency Evaluation Report  
under the requirements of 10CFR50.55(e). This revision provides the  
current status of equipment affected under condition description.

Very truly yours,



E. E. Van Brunt, Jr.  
APS Vice President,  
Nuclear Projects Management  
ANPP Project Director

EEVB/KCP:ru

Attachment

cc: See Page Two

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Mr. T. W. Bishop  
DER 82-78  
Page Two

cc: Richard DeYoung, Director  
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U. S. Nuclear Regulatory Commission  
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FINAL REPORT - REVISION 3 - DER 82-78  
DEFICIENCY EVALUATION 50.55(e)  
ARIZONA PUBLIC SERVICE COMPANY (APS)  
PVNGS UNITS 1, 2 & 3

I. DESCRIPTION OF DEFICIENCY

During surveillance activity and random inspection of the Unit 2 Control Building Chiller Control Panels 2J-ECA-E01, 2J-ECB-E02, 2J-ECA-E03 and 2J-ECB-E04 supplied by Carrier Air Conditioning, it was found that electrical terminations did not comply with the visual inspection criteria for the included Thomas & Betts and AMP crimp lug terminations. These criteria are established by Thomas & Betts basic Criteria and Installation Procedures (TRM-1) dated June, 1978, and related AMP installation criteria. The visual defects include:

- o Terminations exceed 1/16" of conductor extending beyond the barrel of the lug.
- o Conductor not exposed from barrel of the lug.
- o Paper not removed from conductor prior to crimping barrel of the lug.
- o Lugs were reversed, preventing visual inspection.

II. ANALYSIS OF SAFETY IMPLICATIONS

This condition is evaluated as reportable. If inadequately crimped lugs are left uncorrected, potential hazards of open or short circuits could occur which possibly could jeopardize the functional requirements of this safety related equipment.

III. CORRECTIVE ACTION

All Class 1E terminations utilizing crimp type lugs in the subject equipment shall be inspected to visual criteria which provides that the conductor shall be approximately flush with or protrude through the barrel approximately 1/16". Any connectors which do not meet these criteria shall be repaired as applicable following the termination practices established in Bechtel Construction Specification 13-EM-306. This condition will be corrected per the following Design Change Packages:

10E-EC-024      20E-EC-024      30E-EC-024

In addition to reportability under 10CFR50.55(e), Bechtel PVNGS Project considers the deficiency to be reportable under the requirements of 10CFR Part 21 by the supplier. This report satisfies the reporting requirements specified under 10CFR21 - 21 (b) (3) with the exception of sub-part (vi) which requires the number and location (customers and/or facilities) of other possible defective equipment. A copy of this report will be transmitted to Carrier Air Conditioning requesting their review for reporting under 10CFR Part 21.