Arizona Public Service Company

May 14, 1984
ANPP-29499-TDS/TRB

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 83-84
A 50.55(e) Reportable Condition Relating to Missing Bolts For Six (6) Motor Control Centers In Unit 1
File: 84-019-026; D.4.33.2

Reference: A) Telephone Conversation between T. Young and K. C. Parrish on December 6, 1983
B) ANPP-28488, dated December 22, 1983 (Interim Report)
C) ANPP-28792, dated February 6, 1984 (Interim Report, Rev. 1)

Dear Sir:

Attached is our final written report of the deficiency referenced above, which has been determined to be Not Reportable under the requirements of 10CFR50.55(e).

Very truly yours,

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

EEVB/TRB:ru
Attachment

cc: See Page Two

cc: Richard DeYoung, Director
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FINAL REPORT - DER 83-84
DEFICIENCY EVALUATION 50.55(e)
ARIZONA PUBLIC SERVICE COMPANY (APS)
PVNGS UNIT 1

I. Condition Description

This report was initiated to analyze the safety implications of the empty bolt holes, identified during the NRC CAT inspection, in the base frame channels of six (6) NEMA III cabinets which house Motor Control Centers (MCCs) in Unit 1 (Tag Nos. 1-E-PHA-M33, M35 and M37 and 1-E-PHB-M-34, M35 and M38).

There were a total of eighty seven (87) empty bolt holes in the subject Motor Control Centers. Of these eighty seven (87), eighty (80) were for 3/8 inch diameter channel framing bolts and the balance were associated with lifting lug attachments.

The lifting lugs as shown on the vendor drawings were used to handle the NEMA III cabinets during shipping and during installation. After installation, the lifting lugs were removed as they created a personnel safety hazard by protruding into aisle space. The installation drawings did not indicate that the lifting lugs must remain in place, nor did the drawings adequately specify the bolting arrangement of the cabinets with the lifting lugs removed.

Bechtel engineering has investigated the alleged violation concerning the missing bolts from the base frames. All base channel assembly bolts associated with the installation of the Motor Control Centers have been reviewed. No bolts were found missing, other than the conditions described in the violation. In addition, the Project initiated a two part evaluation program for safety related equipment in Units 1, 2, and 3 as follows:

A. Engineering documents generated during installation of two hundred and forty seven (247) pieces of safety related equipment were reviewed for consistency of qualification reports and installation criteria.

B. The field installations for eighty three (83) selected pieces of safety related equipment in each unit were reviewed. Some selected pieces were chosen because their field installations had been modified and the others were chosed on a random sample basis.

The results of the Part A evaluation indicated that, with the exception of two (2) Direct Current MCC cabinets in each of Units 1 and 2, all engineering documents reviewed were found to be acceptable to the qualification reports and installation criteria. The cabinets housing MCCs 1-E-PKC-M43 and 1-E-PKD-M44 in Unit 1 and 2-E-PKC-M43 and 2-E-PKD-M44 in Unit 2 were found to be connected to each other at one corner rather than directly to the floor slab.

The results of the Part B evaluation are as follows:

Unit 1: Seventy nine (79) pieces of equipment properly installed and four (4) pieces inaccessible for inspection.

Unit 2: Eighty (80) pieces of equipment properly installed, one (1) piece inaccessible for inspection, and two (2) pieces not yet installed.

Unit 3: Fifty six (56) pieces of equipment properly installed and twenty seven (27) pieces not yet installed.

II. Analysis of Safety Implications

Bechtel Engineering has analyzed the effect of the eighty seven (87) missing bolts on the qualification, integrity and operation of the identified MCCs. This analysis is documented in Bechtel Calculation No. 13-CC-ZQ-E01, Revision 2. This verifies that with the as-installed condition:

a. The seismic qualification of the MCCs would not be invalidated.

b. The structural integrity of the system under any design loading would not be affected.

c. The MCCs would remain operable during a seismic event.

The installation of these particular MCCs is unique in that they are the only ones mounted inside NEMA III Cabinets. Consequently, it is not a generic problem with MCC installations.

Bechtel engineering also analyzed the incorrect installations found in Part A of the two-part evaluation program described above, and concluded that, if this condition were left uncorrected, the two (2) Direct Current MCCs involved would still perform their safety functions satisfactorily during a seismic event (Bechtel Calculation No. 13-CC-ZQ-E01).

The overall results of the evaluation program indicate that safety-related equipment is installed properly and no further inspection is necessary to satisfy the requirements of this DER.

Based upon the above, these conditions are evaluated as not reportable under 10CFR50.55(e) and/or Part 21, because if left uncorrected, they would not pose a significant safety hazard.

III. Corrective Action

A. Field Change Request 76655-E, which clarifies the NEMA III cabinet installation details, will be incorporated into GE Drawing 272A5601LD by June 30, 1984.

B. The cabinet installations in Unit 1 will be made to conform to the revised GE drawings 272A5601LD and 204B4037. DCP 1SE-PH-035, Rev. 1, Mod. 3 issued for this work is estimated to be completed by June 15, 1984.

C. Installation work in Units 2 and 3 will be completed in accordance with the revised GE drawings and DCPs 2SE-PH-035 and 3SE-PH-035 prior to fuel load for each unit.

D. Bechtel Construction Work Plan Procedure (WPP/QCI) 258.0 has been revised to require engineering approval prior to the removal of any vendor installed temporary attachments (i.e., lifting eyes or lugs).

E. DCPs 1SC-PK-032 and 2SC-PK-032 were issued to correct the improper installations of the Direct Current MCCs 1-E-PKC-M43 and 1-E-PKD-M44 in Unit 1 and 2-E-PKC-M43 and 2-E-PKD-M44 in Unit 2. These DCPs are currently being reviewed by the Design Change Review Group. The required modificaton for Unit 3 was accomplished by FCR 52,773-C.