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Arizona Public Service Company

P.O. BOX 21666 • PHOENIX, ARIZONA 85036

February 6, 1984
ANPP-28792-BSK/TRB

U. S. Nuclear Regulatory Commission
Region V
Creskide 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: Interim Report, Revision 1 - DER 83-84
A 50.55(e) Potentially Reportable Deficiency Relating to
Eighty Seven (87) 3/8" Bolts Found Missing From The Seismic
Tie Downs Of The Floor Frame Assemblies for Six (6) Motor
Control Centers in Unit 1.
File: 84-019-026; D.4.33.2

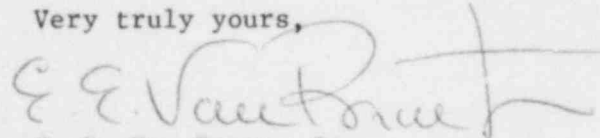
Reference: A) Telephone Conversation between T. Young and K. Parrish on
December 6, 1983.
B) ANPP-28488, dated, December 22, 1983 (Interim Report)

Dear Sir:

The NRC was notified of a potentially reportable deficiency in Reference
A and an Interim Report was transmitted by Reference B. At that time, it
was estimated that a Final Report would be available by February 21, 1984.

Due to the extensive investigation and evaluation required, a revised
Interim Report is attached. It is now expected that this information
will be finalized by May 15, 1984, at which time a complete report will
be submitted.

Very truly yours,



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

EEVB/TRB:db
Attachment

cc: See Page Two

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PDR ADOCK 05000528
S PDR

Mr. T. W. Bishop
DER 83-84
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cc: Richard DeYoung, Director
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Washington, D. C. 20555

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INTERIM REPORT - DER 83-84
POTENTIAL REPORTABLE DEFICIENCY
ARIZONA PUBLIC SERVICE COMPANY (APS)
PVNGS UNIT 1

I. POTENTIAL PROBLEM

This report was initiated because it appeared that (87) 3-inch bolts were missing on the floor frame assemblies of 6 Class 1E Motor Control Centers (MCCs) 1EPHAM33, 35, 37 and 1EPHBM34, 36, and 38. The NEMA III nonwalk-in cabinets which house the MCCs were constructed and mounted per General Electric installation drawing No. 27 A5601LD; however, using the drawings provided by General Electric (GE) adequate quantitative or qualitative information was not available concerning the installation of bolts in the floor frame assemblies. Bechtel Engineering has subsequently investigated this condition.

See Figures 1 and 2 for the connection details and the location of the missing bolts on the front and back side of the cabinets, respectively. The lifting lugs as shown on the vendor drawings were used to handle the NEMA III cabinets during shipping from Mebane, North Carolina to the Palo Verde Jobsite, and during their installations. After completing the installation, the lifting lugs were removed. The installation drawings did not indicate that the lifting lugs must remain in place, and since the lugs posed a safety hazard by projecting into the walkways, it was deemed appropriate that they be removed.

On the front side of the cabinets (see Figure 1), the 4-3/8-diameter bolts (Item 1) that the lifting lug fits over were either removed when the lifting lugs were removed, or were never installed by General Electric (GE) prior to shipment. For the front side, the 3/8-inch diameter bolts serve as part of the connection between the front base channel (C6) and a parallel channel (C4) which, in turn, is connected to a transverse channel (C4). On the back side of the cabinets (see Figure 2), the 2-5/8-inch diameter bolts (Item 6) which connect the lifting lug to the base channel (C6) were not reinstalled after the lifting lugs were removed. It was not apparent from the vendor drawings that these bolts also serve as part of the connection between the back base channel (C6) and a parallel channel (C4) which, in turn, is connected to a transverse channel (C4).

The front and back connections of the cabinet at each lifting lug location have other bolts which were in place after removal of the lifting lugs. Therefore, only part of the bolts in the connection were missing after the lifting lugs were removed.

The missing bolts were overlooked by the QC inspection and during a subsequent Bechtel Engineering audit of all safety-related equipment installations. The audit was concerned with the attachment of the equipment to the structure (i.e., slab, wall, etc.) compared to the installation drawings and the qualification report and did not review the assembly of equipment and cabinets. It should also be noted that the audit team found that the installation of the MCCs and the NEMA III cabinets were not incomplete, that the MCCs mounted in the NEMA III cabinets were not consistent with the qualification of the MCCs, and that an Engineering evaluation was required. As a result of the Engineering evaluation, DCP 1SE-PH-035 was issued to have the installation modified. However, the original issue of the DCP did not address the subject bolts.

As a final point, it may be stated that the installation of these MCCs is unique because these MCCs are the only types mounted inside NEMA III cabinets which are designed to protect the cabinet from the effects of the Auxiliary Building sprinkler system. No other safety-related equipment is installed in this manner.

Bechtel Engineering evaluated the condition concerning the subject missing bolts from the base frames as shown in Figures 1 and 2 for the six motor control centers (MCCs). The results of the evaluation as documented in calculation 13-CC-ZQ-E01, Revision 2, indicated that the seismic qualification of the MCCs would not be invalidated under the as-installed condition, nor would the condition affect the structural integrity of the system under any design loading. General Electric has reviewed the results of Bechtel analysis and concurs with the conclusions. This particular condition is evaluated as not reportable because the missing bolts would have no impact on MCCs which are part of the vital AC onsite power distribution system and are not necessary to ensure their structural integrity.

II. APPROACH TO AND STATUS OF PROPOSED RESOLUTION

1. Although the missing 4-3/8-inch diameter bolts on the front side and the 2-5/8-inch diameter bolts on the back side at each lifting lug location are not considered safety significant and are not required, they will be installed in Unit 1 per revised and clarified GE drawings and as documented by DCP 1SE-PH-035 which will be implemented prior to fuel load.
2. Installation work, using updated and clarified drawings in Units 2 and 3, is currently ongoing and installations will be completed in accordance with these documents.
3. Bechtel Construction Work Plan Procedure (WPP/QCI) 258.0 has been revised to require Engineering approval prior to the removal of any lifting lug from installed equipment.

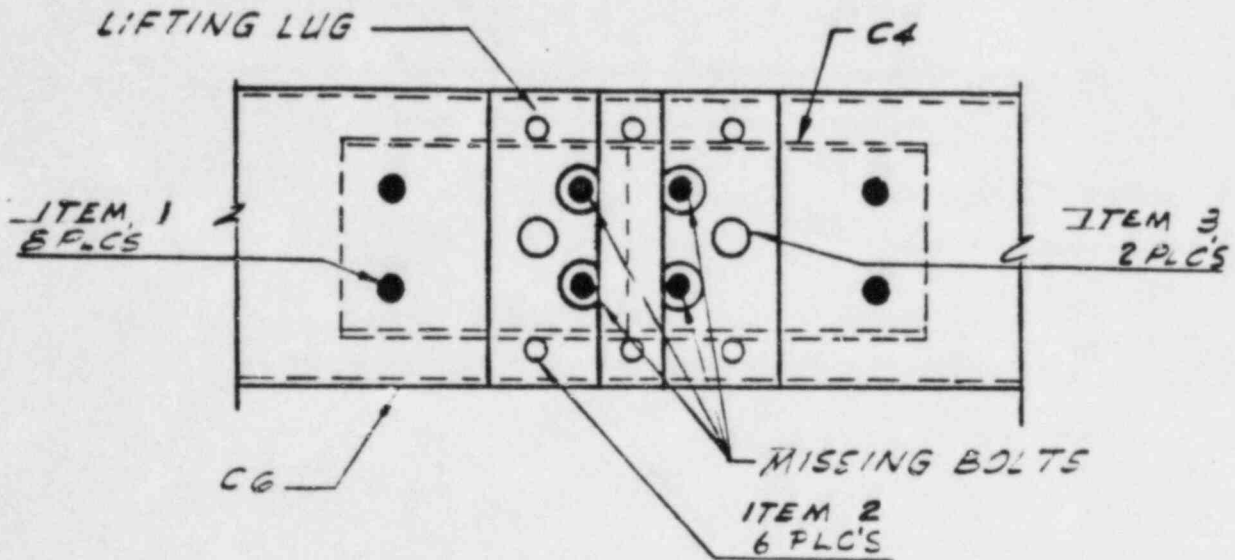
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4. Bechtel has initiated a review of the documents and a random reinspection of safety-related equipment installations in Unit 1, 2 and 3 attached to structures to assure compliance with design requirements. The reinspection will determine if the safety-related equipment was installed per vendor drawings and instruction. The results will be documented by DER 83-84.

III. PROJECTED COMPLETION OF CORRECTIVE ACTION AND SUBMITTAL OF THE FINAL REPORT

Evaluation of this condition and submittal of the Final Report is Forecast to be completed by May 15, 1984.

FIGURE 1 - FRONT LIFTING LUG ASSEMBLY (Two per cabinet)



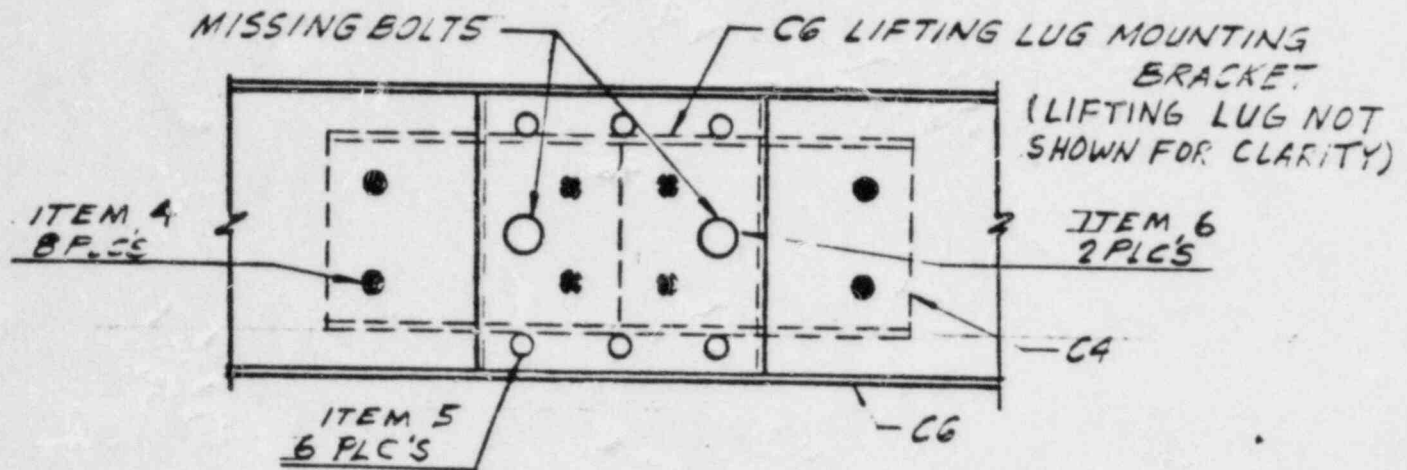
Item 1 - Holes for 3/8-inch diameter mounting bolts which attach the C4 support grid to the C6 base. These bolts are required after lifting lug removal.

Item 2 - Mounting holes for the lifting lugs attachment bolts. No bolts are required after lifting lug removal.

Item 3 - Holes for 5/8-inch diameter bolts used to attach the lifting lug. These bolts are not required after lifting lug removal.

Note A - After lifting lug removal 2-5/8-inch diameter bolts (Item 3) may be installed as a substitute for the 4-3/8-inch diameter bolts (Item 1).

FIGURE 2 - BACK LIFTING LUG LOCATION (Two per cabinet)



Item 4 - Holes for 3/8-inch diameter mounting bolts which attach the C4 support girt to the C6 base.

Item 5 - Mounting holes for the lifting lug attachment bolts. No bolts are required after lifting lug removal.

Item 6 - Holes for 5/8-inch diameter bolts used to attach the lifting lug. These bolts are required to be reinstalled after lifting lug removal.

Note B - The C6 lifting lug mounting bracket, which is welded in place, covers the four middle 3/8-inch diameter bolt locations. This makes installation of the middle 3/8-inch diameter bolts impossible. The two 5/8-inch diameter bolts shall be reinstalled as a substitute after lifting lug removal.