FINAL REPORT

POSSIBLE REPORTABLE DEFICIENCY 50.55(e)

ARIZONA PUBLIC SERVICE COMPANY (APS)

PALO VERDE NUCLEAR GENERATING STATION (PVNGS)

UNITS #1 AND #2

JULY 9, 1980

## I. Purpose

The purpose of this report is to provide information required by 10CFR50.55(e) relating to the inappropriate inspection of ASME Section III, Class 3, piping system welds.

## II. Background

The original welding and nondestructive testing requirements for field erected piping was developed by Bechtel Engineering, based on the ASME Section III Code, 1974 Addition, which was the Code in effect for the project at that time. These welding, testing and inspection requirements were described, in Matrix form, on Drawing No. 13-P-ZZG-011, commonly referred to as "Form 84". This Drawing was revised on January 4, 1977 to update the requirements to the Construction Permit ASME Code, effective date of Winter 1975. Drawing No. 13-P-ZZG-011 (Form 84), Revision 1, was reviewed and approved, in accordance with the Project Quality Assurance Program, by Bechtel's Materials and Quality Services, the Authorized Nuclear Inspector and APS personnel.

In spite of this review, APS was informed by Bechtel that Deficiency Evaluation Report No. 80-5, dated March 27, 1980, was issued to document the fact that Drawing No. 13-P-ZZG-011, Revision 1, was not in conformance with the Winter 1975 ASME Code Addenda.

Specifically, the Winter 1975 Addenda changed the wording of Paragraph ND-5222 to require that circumferential weld joints larger than 2" to be examined by either magnetic particle, liquid penetrant or radiographic methods. Contrary to this requirement, Drawing No. 13-P-ZZG-011 (Form 84) listed all ASME Section III, Class 3, welds between 2" and 4" to be visually inspected as was required by the 1974 Addition of the ASME Code.

## III. Description of the Deficiency

This deficiency only affects field welds in piping systems sizes 2" to 4" as Form 84 is only used for construction. As a result of this oversight, 169 ASME Section III, Class 3, welds in Unit #1 and 32 welds in Unit #2 were visually inspected, rather than examined by the liquid penetrant (LP) method as the Code requires.

IV. Analysis of Safety Implications

A reinspection of the 201 welds by liquid penetrant examination revealed that 198 welds had no indications or defects. Three (3) welds had repairable indications as follows:

1. Line EC-A-001-HBCB-4", Weld No. W007

   One porosity and one crack indication, depth of indication was 3/32". The excavated area was liquid penetrant tested and was found to be acceptable. After the repair, the weld was liquid penetrant tested again and was found to be acceptable.

2. Line DG-008-GBCB-3", Weld No. W002

   Porosity areas noted. Indications were ground to a depth of 1/16" and liquid penetrant tested and repaired. Following the repair, the weld was again liquid penetrant tested and found to be acceptable.

3. Line EC-A-010-HBCB-4", Weld No. W028

   Porosity and linear indications noted. The area was ground to 1/16" depth, liquid penetrant tested and repaired. Following repair, the weld was again liquid penetrant tested and was found to be acceptable.

An Engineering evaluation determined that the above indications are of a minor nature and, if the welds were left unrepaired, the unrepaired welds would have no affect on the safe operation of the power plant. Therefore, this condition is considered to be not reportable.

V. Corrective Action Taken

1. Nonconformance Report W-X-278 was written to document the deficient welds and has now been dispositioned.

2. Corrective Action Request (CAR) No. S-80-7 was initiated and dispositioned to initiate corrective action to preclude recurrence of similar deficiencies.

3. All of the 201 welds have been liquid penetrant inspected. Three (3) of these were found to have repairable indications which have been repaired and accepted after reinspection.