FINAL REPORT CONCERNING DEFICIENCIES IN SA-312 TYPE 304 PIPE MANUFACTURED BY YOUNGSTOWN WELDING AND ENGINEERING COMPANY

San Onofre Nuclear Generating Station,
Units 2 and 3

INTRODUCTION

This final report is submitted pursuant to 10CFR50.55(e)(3). It describes a deficiency identified in construction in which SA-312 Type 304 pipe welded without filler metal and manufactured by Youngstown Welding and Engineering Company (Youngstown) was found to contain defects in longitudinal seam welds in excess of those permitted by specification. This pipe was installed in the Unit 3 Low Pressure Safety Injection System.

BACKGROUND

The background for this deficiency is similar to that described in the 10CFR50.55(e) report submitted by Arizona Public Service Company (APS) to NRC Region V by letter dated November 17, 1978. At San Onofre, however, the amount of material manufactured by Youngstown and furnished via Guyon Alloys, Pullman Power Products (Pullman) and Bechtel Power Corporation (Bechtel) to the jobsite was limited to use in 1 pipe spool and 4 pipe supports for Unit 2 and to use in 3 pipe spools and 1 pipe support for Unit 3.

The need to reinspect this material by UT was identified by Pullman to Bechtel by a letter dated October 3, 1978. Reinspection was indicated as required due to possibly not fully effective inspection during manufacturing as a result of material surface condition following solution heat treatment. Reinspection was performed at the jobsite on October 12, 1978, of all SA-312, Type 304 material furnished by Youngstown except for 2 pipe supports which were instead returned to Pullman.

DISCUSSION

The following discussion is responsive to 10CFR50.55(e)(3).

Description of the Deficiency

Two pipe spools installed in the Unit 3 Low Pressure Safety Injection System were found to contain UT indications in excess of those permitted by specification. The methods used and nature of the indications were similar to those described in the APS report referenced above.

Analysis of Safety Implications

Deficiencies in piping installed in the Low Pressure Safety Injection System could affect the proper operation of that system. For the material used in this case, UT examination sensitivity was not sufficient to determine if the indications resulted in violation of minimum wall thickness which could create such deficiencies.

Corrective Action

All SA-312, Type 304 material furnished by Youngstown and furnished to the jobsite has been reinspected and either found acceptable or rejected. Two pipe supports not reinspected at the jobsite have been returned to Pullman for inclusion with other Youngstown material not yet furnished to the jobsite.

Any further such material furnished to the jobsite will be reinspected at Pullman and accepted prior to delivery. Additional corrective action by Pullman regarding Youngstown is as described in the APS report referenced above.

CONCLUSION

Corrective action has been completed which will assure that longitudinal seam weld deficiencies in SA-312, Type 304 pipe manufactured by Youngstown are identified and corrected prior to installation or use at San Onofre Units 2 and 3.