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December 14, 1984 REGIME VIAL ANPP-31484-TDS/TRB

U. S. Nuclear Regulatory Commission Region V 1450 Maria Lane - Suite 210 Walnut Creek, California 94596-5368

Attention: Mr. D. r. Kirsch, Acting Director Division of Reactor Safety and Projects

Subject: Final Report - DER 84-99 A 50.55(e) Reportable Condition Relating To The Unit 1 Regenerative Heat Exchanger. File: 84-019-026; D.4.33.2

Reference: A) Telephone Conversation between R. Dodds and L. Spiers on November 30, 1984

Dear Sir:

Attached is our final written report of the Reportable Deficiency under 10CFR50.55(e) referenced above.

Very truly yours, ESIGRAL

1. IE-27

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

EEVB/TRB/nj Attachment

cc: See Page Two

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Mr. D. F. Kirsch DER 84-99 Page Two

cc:

Richard DeYoung, Director Office of Inspection and Enforcement U. S. Nuclear Regulatory Commission Washington, D. C. 20555

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# FINAL REPORT - DER 84-99 DEFICIENCY EVALUATION 50.55(e) ARIZONA PUBLIC SERVICE COMPANY (APS) PVNGS UNIT 1

### I. Description of Deficiency

While performing work for a NRC open item on the Unit 1 regenerative heat exchanger, tag no. 1MCHEEO1, it was found that the bolt holes for the upper support mounting bracket were misaligned and the vertical slot bolt holes were modified to an "L" shape contrary to design drawings. The support bolts were located in the horizontal section of the modified vertical slots. This condition was documented on NCR SM-5205.

With the support bolts in the horizontal section of the modified slot, thermal growth of the heat exchanger would be restrained. This condition could possibly cause failure of the heat exchanger supports and/or violation of the Reactor Coolant System (RCS) pressure boundary.

#### Evaluation

The Regenerative Heat Exchanger is vertically mounted with an upper and lower support. The lower support is "fixed" while the upper support is designed to allow thermal growth of the heat exchanger. The upper support consists of a bracket fixed to the wall and a bracket fixed to the heat exchanger. These brackets are "loosely" bolted together with the bolt holes on the wall bracket being slotted to allow vertical movement. Due to a misalignment between the slotted holes and holes in the opposing bracket, the slotted holes were modified to an "L" shape. The resulting bolted connection would not allow for thermal growth since the bolts were not in the vertically slotted section.

C-E has evaluated this condition and has determined that, if left uncorrected, thermal growth of the heat exchanger would have caused the mounting bolts to fail which would invalidate the seismic analysis. Under this condition the structural integrity of the heat exchanger could possibly be violated during a seismic event, thereby resulting in a Loss of Coolant Accident (LOCA).

The deficiency was dispositioned to restore the monitoring bracket to its original configuration and to relocate it so that the bolt holes were alligned.

As stated on NCR SN-5205, this condition is isolated to the Unit 1 Regenerative Heat Exchanger.

The root cause of this deficiency was a construction error during the installation of the heat exchanger which was not caught during the installation inspection process.

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## II. Analysis of Safety Implications

Based on the above, this condition is evaluated as reportable under the requirements of 10CFR50.55(e); since, if this condition were to remain uncorrected, it could represent a significant safety condition.

This condition is evaluated as not reportable under the requirements of 10CFR Part 21 since this condition does not represent the delivery of a defective component.

## III. Corrective Action

The subject bracket has been restored to its original configuration and relocated to provide alignment of the bolt holes. This work was performed per the final disposition of NCR SM-5205.

The need for added attention to detail in inspection activities has been emphasized throughout the project in Quality Talk sessions.

### IV. References

- 1. Letter V-CE-31281, dated November 1, 1984
- 2. Letter V-CE-31525, dated December 7, 1984
- 3. IOM-C/E-7657, dated December 14, 1984