

50.55(e) Report

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Arizona Public Service Company

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February 28, 1983

ANPP-23119-GHD/BSK REGION V FILE

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

Attention: Mr. D. M. Sternberg, Chief  
Reactor Projects Branch 1

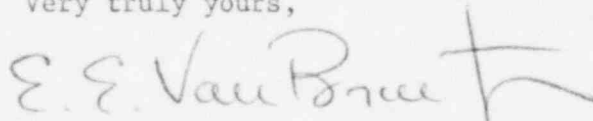
Subject: Final Report - DER 83-8  
A 50.55(e) Report Relating to  
Rockwell Hydrogen Recombiner Qualification Test Failure Due  
To Oxide On Relay Contacts  
File: 83-019-026  
D.4.33.2

Reference: (A) Telephone Conversation between P. Narbut and  
J. Cook on February 3, 1983

Dear Sir:

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

Very truly yours,



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

EEVBJr/GHD:db

Enclosure

cc: See Attached Page 2

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U. S. Nuclear Regulatory Commission  
Attention: Mr. D. M. Sternberg, Chief  
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February 28, 1983  
ANPP-23119-GHD/BSK

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 83-8  
DEFICIENCY EVALUATION 50.55(e)  
ARIZONA PUBLIC SERVICE COMPANY (APS)  
PVNGS UNITS 1, 2 & 3

I. DESCRIPTION OF DEFICIENCY

Rockwell International has notified this project via a 10CFR Part 21 report that their Hydrogen Recombiners contain a significant deficiency.

During the final performance test (following the post-LOCA environmental cycling test) of the IEEE 323 Environmental Qualification test program, the Hydrogen Recombiner relay coil of the timer was energized and after one cycle it failed to hold closed. The unit was subsequently subjected to thirty (30) additional actuation cycles and it operated satisfactorily. During the failure analysis, the unit was subjected to an elevated temperature test with high humidity (estimated to be greater than ninety percent (90%) RH) and the failure condition (relay contacts failing to hold closed) was again observed. Buffing and polishing the relay contacts restored the unit to normal operation. Therefore, it was concluded that the failure resulted from an oxide film build-up on the contacts throughout the environmental qualification testing.

II. ANALYSIS OF SAFETY IMPLICATIONS

This condition is evaluated as Reportable. If the condition remained uncorrected, the hydrogen recombiners would fail to operate as required, which would lead to a combustible concentration of hydrogen within the containment under certain accident conditions.

III. CORRECTIVE ACTION

DCP ASN-HP-021 is being issued to implement Rockwell International's corrective action plan to correct the deficiency in both of the Hydrogen Recombiners at PVNGS. The existing timers will be replaced with sealed timers that are qualified to IEEE 323.