

Arizona Public Service Company

P.O. BOX 21666 • PHOENIX, ARIZONA 85036

November 22, 1982
ANPP-22368-GHD/BSK

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REGION V 130

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

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

Subject: Interim Report - DER 82-61
A 50.55(e) Potential Reportable Deficiency Relating to
Reactor Coolant Pump Diffusor-Ring Cap Screws May
Fail And Damage Pump.
File: 82-019-026
D.4.33.2

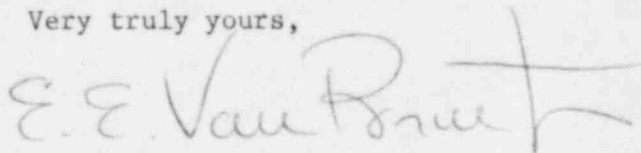
Reference: Telephone Conversation between J. Eckhardt and
G. Duckworth on October 21, 1982

Dear Sir:

The NRC was notified of a potential reportable deficiency in the
referenced telephone conversation. At that time, it was estimated that a
determination of reportability would be made within thirty (30) days.

Due to the extensive investigation and evaluation required, an Interim
Report is attached. It is now expected that this information will be
finalized by February 24, 1983, at which time a complete report will be
submitted.

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

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INTERIM REPORT - DER 82-61
POTENTIAL REPORTABLE DEFICIENCY
ARIZONA PUBLIC SERVICE COMPANY (APS)
PVNGS UNITS 1, 2 & 3

I. POTENTIAL PROBLEM

Diffusor retaining cap screws of the System 80 Reactor Coolant Pumps supplied by Comubustion Engineering (CE) as part of the NSSS have recently failed in the CE-KSB test loop. These cap screws support the diffusor-suction ring assembly of an idle pump. With the pump running, hydraulic forces unload the sixteen (16) cap screws in question. Two (2) cap screws secure each retaining ring segment, and locking devices retain the cap screws. The screws that have failed to date have failed either under the head or at the first thread. The heat treatment condition of the material of these screws causes the material to be susceptible to hydrogen embrittlement/stress corrosion cracking.

If both cap screws per segment ring failed, a loose ring segment/cap screw element would exist. While this element is trapped above the impeller, it would be free to move around above the impeller, and some damage might occur. Should all or some of the diffusor retaining cap screws fail, CE would not anticipate any increase in risk to the health and safety of the public. Rather, CE considers this problem as a risk to the continued operational capability of the reactor coolant pump(s).

II. APPROACH TO AND STATUS OF PROPOSED RESOLUTION

CE is continuing its evaluation of the problem and some potential solutions. The results of this effort will be presented in the final report.

The cap screw material heat treatment is to be changed to a condition such that the material is not susceptible to hydrogen embrittlement/stress corrosion cracking. Some other minor changes will be included in the change-out to alleviate the load these screws see.

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 February 24, 1983