

Arizona Public Service Company

P.O. BOX 21666 • PHOENIX, ARIZONA 85036

December 30, 1983
ANPP-28514-KCP/BSK

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

Attention: Mr. T. W. Bishop, Director, Division of
Resident, Reactor Projects and Engineering Programs

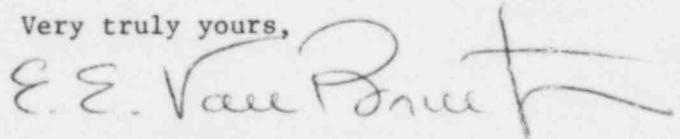
Subject: Final Report - DER 83-55
A 50.55(e) Report Relating to Missing Thermal Liner in Safety
Injection System Line
File: 83-015-026; D.4.33.2

Reference: A) Telephone Conversation between P. Narbut and R. Tucker on
August 1, 1983
B) ANPP-27604 dated August 22, 1983 (Interim Report)
C) ANPP-28211 dated November 9, 1983 (Time Extension)

Dear Sir:

Attached is our final written report of the deficiency referenced above,
which has been determined to be Not Reportable under the requirements of
10CFR50.55(e).

Very truly yours,



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

EEVB/KCP/sls
Attachment

cc: See Page Two

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Mr. T. W. Bishop
DER 83-55
Page Two

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

Copies 1 through 25 of CE
Doc. No. CEN-264(V)-P (proprietary)
are enclosed for the NRC office
in Washington, D.C.

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FINAL REPORT - DER 83-55
DEFICIENCY EVALUATION 50.55(e)
ARIZONA PUBLIC SERVICE COMPANY (APS)
PVNGS UNIT 1

I. Description of Deficiency

After hot functional testing of Unit 1, a visual inspection of the Reactor Coolant Pump 1-RCE-P01-1A and associated piping was performed. It was revealed that the thermal liner, for the 14" safety injection nozzle installed in line SI-A207-BCCA-14" had broken loose and was missing. Further investigation determined that the liner was wedged between the outer shell and the flow baffle of the reactor vessel. The liner was retrieved from the reactor vessel by Combustion Engineering (C-E) and shipped to C-E's Chattanooga facility for inspection and problem resolution. The results of this inspection and related analyses are contained in the attached C-E report entitled "Report on Palo Verde Unit 1 Safety Injection Nozzle Thermal Liner", (Document No. CEN-264(V)-P).

II. Analysis of Safety Implications

The analysis of safety implications is provided in Sections 3.0, "Inspections and Examinations", and 4.0, "Problem Definition", of the "Report on Palo Verde Unit 1 Safety Injection Nozzle Thermal Liner", attached.

III. Corrective Action

C-E recommended that the three (3) remaining thermal liners for Unit 1 be removed, and the expansion grooves blended into the nozzle wall area. The thermal liners, four (4) per unit, for Units 2 and 3, will also be removed, and the expansion grooves will be blended to preclude stress risers in the safety injection nozzles.

Bechtel is implementing the required corrective actions, via the following design change packages, before fuel load for the respective units.

1SM-RC-102

2SM-RC-102

3CM-RC-102

In addition, SAR Change Notice No. 1131 will be issued prior to Unit 1 fuel load to identify the deletion of the thermal liners from the safety injection nozzles. This SAR change will reflect the deviation from the standard System 80 design as described in CESSAR Section 5.4.3.

AFFIDAVIT PURSUANT

TO 10 CFR 2.790

Combustion Engineering, Inc.)
State of Connecticut)
County of Hartford) SS.:

I, A. E. Scherer, depose and say that I am the Director, Nuclear Licensing, of Combustion Engineering, Inc., duly authorized to make this affidavit, and have reviewed or caused to have reviewed the information which is identified as proprietary and referenced in the paragraph immediately below. I am submitting this affidavit in conformance with the provisions of 10 CFR 2.790 of the Commission's regulations and in conjunction with the application of Arizona Public Service for withholding this information.

The information for which proprietary treatment is sought is contained in the following document:

CEN-264(V)-P, "Report on Palo Verde Unit 1 Safety Injection Nozzle Thermal Liner".

This document has been appropriately designated as proprietary.

I have personal knowledge of the criteria and procedures utilized by Combustion Engineering in designating information as a trade secret, privileged or as confidential commercial or financial information.

Pursuant to the provisions of paragraph (b) (4) of Section 2.790 of the Commission's regulations, the following is furnished for consideration by the Commission in determining whether the information sought to be withheld from public disclosure, included in the above referenced document, should be withheld.

1. The information sought to be withheld from public disclosure is the methodology related to the determination of usage factors and design features of reactor coolant system components, which is owned and has been held in confidence by Combustion Engineering.

2. The information consists of test data or other similar data concerning a process, method or component, the application of which results in a substantial competitive advantage to Combustion Engineering.

3. The information is of a type customarily held in confidence by Combustion Engineering and not customarily disclosed to the public. Combustion Engineering has a rational basis for determining the types of information customarily held in confidence by it and, in that connection, utilizes a system to determine when and whether to hold certain types of information in confidence. The details of the aforementioned system were provided to the Nuclear Regulatory Commission via letter DP-537 from F.M. Stern to Frank Schroeder dated December 2, 1974. This system was applied in determining that the subject document herein are proprietary.

4. The information is being transmitted to the Commission in confidence under the provisions of 10 CFR 2.790 with the understanding that it is to be received in confidence by the Commission.

5. The information, to the best of my knowledge and belief, is not available in public sources, and any disclosure to third parties has been made pursuant to regulatory provisions or proprietary agreements which provide for maintenance of the information in confidence.

6. Public disclosure of the information is likely to cause substantial harm to the competitive position of Combustion Engineering because:

a. A similar product is manufactured and sold by major pressurized water reactor competitors of Combustion Engineering.

b. Development of this information by C-E required thousands of manhours of effort and tens of thousands of dollars. To the best of my knowledge and belief a competitor would have to undergo similar expense in generating equivalent information.

c. In order to acquire such information, a competitor would also require considerable time and inconvenience related to the development of methodology to determine usage factors and design features of reactor coolant system components.

d. The information required significant effort and expense to obtain the licensing approvals necessary for application of the information. Avoidance of this expense would decrease a competitor's cost in applying the information and marketing the product to which the information is applicable.

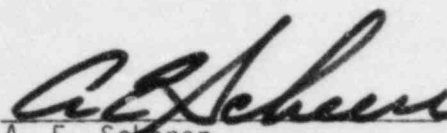
e. The information consists of methodology related to the determination of usage factors and design features of reactor coolant system components, the application of which provides a competitive economic advantage. The availability of such information to competitors would enable them to modify their product to better compete with Combustion Engineering, take marketing or other actions to improve their product's position or impair the position of Combustion Engineering's product, and avoid developing similar data and analyses in support of their processes, methods or apparatus.

f. In pricing Combustion Engineering's products and services, significant research, development, engineering, analytical, manufacturing, licensing, quality assurance and other costs and expenses must be included. The ability of Combustion Engineering's competitors to utilize such information

without similar expenditure of resources may enable them to sell at prices reflecting significantly lower costs.

g. Use of the information by competitors in the international marketplace would increase their ability to market nuclear steam supply systems by reducing the costs associated with their technology development. In addition, disclosure would have an adverse economic impact on Combustion Engineering's potential for obtaining or maintaining foreign licensees.

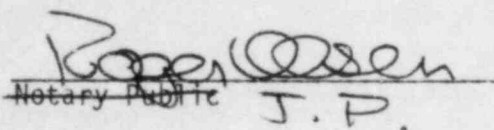
Further the deponent sayeth not.



A. E. Scherer
Director
Nuclear Licensing

Sworn to before me

this 22 day of Dec, 1983



Notary Public J. P.