

DUKE POWER COMPANY

P.O. BOX 33189
CHARLOTTE, N.C. 28242

HAL B. TUCKER
VICE PRESIDENT
NUCLEAR PRODUCTION

TELEPHONE
(704) 373-4531

January 17, 1983

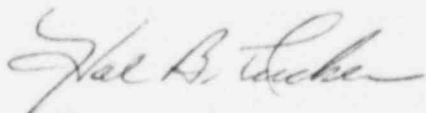
Mr. James P. O'Reilly, Regional Administrator
U. S. Nuclear Regulatory Commission
Region II
101 Marietta Street, Suite 3100
Atlanta, Georgia 30303

Re: Catawba Nuclear Station
Units 1 and 2
Docket Nos. 50-413 and 50-414

Dear Mr. O'Reilly:

Pursuant to 10 CFR 50.55e, please find attached Significant Deficiency Report SD 413-414/82-26.

Very truly yours,



Hal B. Tucker

RWC/php
Attachment

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

Mr. P. K. Van Doorn
NRC Resident Inspector
Catawba Nuclear Station

Mr. Robert Guild, Esq.
Attorney-at-Law
P. O. Box 12097
Charleston, South Carolina 29412

Palmetto Alliance
2135½ Devine Street
Columbia, South Carolina 29205

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Duke Power Company
Catawba Nuclear Station

Report Number: SD 413-414/82-26

Report Date: January 17, 1983

Facility: Catawba Nuclear Station, Units 1 and 2

Identification of Deficiency:

Transamerical Delaval, Inc. furnished four (4) diesels for the Catawba Nuclear Station with the possibility of residual stresses in the piston skirts, that in combination with the operating combustion stresses, could result in an engine failure. This deficiency was identified December 14, 1982 by Duke Power Company.

Initial Report:

On December 20, 1982, Mr. A. J. Ignatonis of the NRC, Region II, Atlanta, Georgia office was notified of this deficiency by Mr. W. O. Henry, Mr. J. M. Lines, and Mr. M. L. Childers of Duke Power Company, Charlotte, North Carolina 28242. This notification was in response to Mr. R. A. Pratt's (Transamerica Delaval, Inc.) letter dated November 18, 1982 to Mill Power Supply Company.

Supplier and/or Component:

Transamerica Delaval, Inc. of Oakland, California, manufactured and supplied the piston skirts that are installed in the four Catawba diesels.

Description of Deficiency:

Forty-two (42) of the diesel piston skirts that were manufactured and supplied for the Catawba diesel generators may have residual heat stresses in the piston skirts as a result of the method of heat treating used on these piston skirts between December 1978 and October 1981.

The residual stresses, in combination with the combustion cycle stresses, could cause a cracking of the piston skirt where the piston crown is secured to the piston skirt with studs, and thereby cause a separation of the crown and piston skirt during operation. This situation could result in an engine failure.

Analysis of Safety Implication:

Based on the assumption that a separation of the crown and piston skirt could occur on the diesel and remain undetected, this situation could compromise the diesel generator's ability to provide emergency power as required.

Corrective Action:

The piston skirts were generically furnished to many utilities with the possibility of residual stresses. Transamerica Delaval, Inc. has recognized

this potential problem and has revised their procedure to include a different method of heat treating of the piston skirts to prevent a recurrence of this situation.

Transamerica Delaval, Inc. will also conduct extensive non-destructive testing on the forty-two (42) affected piston skirts and stress relieve as necessary and return the piston skirts to Catawba for reinstallation. Any piston skirts which are found defective will be replaced.

The above corrective action is expected to be complete by June 1, 1983.