

DUKE POWER COMPANY

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

HAL B. TUCKER
VICE PRESIDENT
NUCLEAR PRODUCTION

TELEPHONE
(704) 373-4531

34 OCT 4 11:23
October 2, 1984

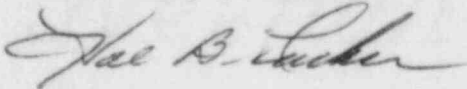
Mr. James P. O'Reilly, Regional Administrator
U. S. Nuclear Regulatory Commission
Region II
101 Marietta Street, NW, Suite 2900
Atlanta, Georgia 30303

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 No. SD 414/84-20. Also, please note that, pursuant to 10 CFR 21, this deficiency has been reported for Unit 1 and has subsequently been corrected.

Very truly yours,



Hal B. Tucker

LTP/mjf

Attachment

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

NRC Resident Inspector
Catawba Nuclear Station

Palmetto Alliance
2135½ Devine Street
Columbia, South Carolina 29205

INPO Records Center
Suite 1500
1100 Circle 75 Parkway
Atlanta, Georgia 30339

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

Mr. Jesse L. Riley
Carolina Environmental Study Group
854 Henley Place
Charlotte, North Carolina 28207

8411190069 841002
PDR ADOCK 05000414
S PDR

OFFICIAL COPY

TC 27/11

CATAWBA NUCLEAR STATION

REPORT NUMBER: SD 414/84-20

REPORT DATE: October 2, 1984

FACILITY: Catawba Nuclear Station Unit 2

IDENTIFICATION OF DEFICIENCY:

A total of twenty-six Unit 2 14 and 16 NAI Rotork Electric Motor Operators were reported to Duke by Rotork as having nitrile thrust base O-rings. The thrust base O-ring material should have been viton. The deficiency was identified on August 3, 1984.

INITIAL REPORT:

On August 31, 1984, H. Dance and V. Brownlee, NRC Region II, Atlanta, GA were notified of the subject deficiency by W. O. Henry, T. L. Utterback, R. L. Oakley and J. H. Henkel of Duke Power Company, Charlotte, N. C. 28242.

COMPONENT AND/OR SUPPLIER:

Rotork Model 14NA1 and 16NA1 operators.

DESCRIPTION OF DEFICIENCY:

The twenty-six operators supplied with nitrile thrust base O-rings do not comply with the environmental qualification report for the inside-containment model NAI operator. The qualification report is based on tests of operators using viton thrust base O-rings. Eight operators are currently assigned to inside and outside-containment applications (the remaining 18 are spare), where environments can reach 330°F and radiation levels of 1.1×10^8 rads total integrated dose. The viton O-rings have been tested to temperatures of 340°F and radiation levels of 2×10^8 rads in the thrust base application. The nitrile O-rings have not been tested to these conditions. From material publications the nitrile material is rated for only 200°F and 1×10^7 rads.

ANALYSIS OF SAFETY IMPLICATIONS:

Failure of these O-rings would result in a loss of gear train oil, and subsequent loss of valve/operator function.

Operators furnished with nitrile O-rings have not been qualified by environmental testing and therefore cannot be relied upon to assure operability. Section 3.9.3.2.2 "Operability Assurance of Duke Safety-Related Active Pumps and Valves" of the FSAR requires that the operators for active valves be qualified by environmental qualification.

Tag numbers affected were: 2NV037A, 2KCC40B, 2SM074B, 2SM075A, 2SM076B, 2SM077A, 2NC195B and 2NC196A. The 18 spare operators could have been used in a number of safety related applications.

CORRECTIVE ACTION:

All affected operators in Unit 2 are to be returned to Rotork for Changeout of the O-rings. All work will be completed by January 1, 1985.

Pursuant to 10CFR21, one of the subject operators, tag number 1KC425A was found in Unit 1. This operator has been replaced.

McGuire Nuclear Station was also affected by the Rotork notification. Their affected operators have been removed and returned to Rotork.