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84 MAY 21 P12:00

May 16, 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 413-414/84-10.

Very truly yours,

Hal B. Tucker Ext

Hal B. Tucker

HBT/php

Attachment

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

NRC Resident Inspector
Catawba Nuclear Station

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CATAWBA NUCLEAR STATION

REPORT NUMBER: SD 413-414/84-10

REPORT DATE: May 16, 1984

FACILITY: Catawba Nuclear Station Units 1 and 2

IDENTIFICATION OF DEFICIENCY:

Six Rotork actuators failed to operate due to a defect in the torque limitor. The deficiency was identified on March 19, 1984.

INITIAL REPORT:

On April 16, 1984, A. Ignatonis, NRC Region II, Atlanta, GA was notified of the subject deficiency, by L. M. Coggins, P. R. Herran, R. Carroll and J. H. Henkel of Duke Power Company, Charlotte, NC 28242.

COMPONENT AND/OR SUPPLIER:

Rotork Model 14, 16 and 30 high speed (173 RPM) actuators with torque limitors.

DESCRIPTION OF DEFICIENCY:

NCI 18185 reported that there were six operators in the field that were inoperable due to the motor turning on the worm shaft. Mike Cooper investigated the problem on one and noted that the open side brake pad in the limitor had moved. This movement caused the motor to stall prematurely. The heat created by the stalled motor caused the rotor to expand and relieve the shrink fit on worm shaft. Bob Arnold from Rotork was notified of the problem and determined that the set screws in the brake locking disc were too small. An investigation was done at Catawba on March 29th by Mike Cooper and Bob Arnold to determine why the brake was contacting the pad in the open direction. It was determined that the brake was briefly contacting the pad in the open direction when removing the disc from the seat. This brief contact causes the small set screws to lose contact with the brake pad disc. Mr. Arnold indicated that larger set screws in the locking disc would correct problem.

After investigation and testing the problem was determined to be associated with the 173 RPM size 14NAT, 16NAT and 30NAT operators.

This defect has been reported to the NRC under 10CFR21 by Rotork.

ANALYSIS OF SAFETY IMPLICATIONS:

The events described above can prevent the valve from operating. These types of acuators are used on safety related active valves. If not corrected this could have affected safety operation.

Tag numbers affected: 1&2KF029, 1&2CA007A, 1&2CA009B, 1&2CA015A, 1&2CA018B, 1&2CA011A, 1&2CA085B, 1&2CA116A, 1&2RF389B, 1&2RF447B, 1&2RF457B, 1&2VQ002A, 1&2VQ003B, 1&2VQ015B, 1&2VQ016A, 1&2ND032A and 1&2ND065B

CORRECTIVE ACTION:

The torque limitor open brake pad locking disc is to be modified in accordance with Rotork procedure QC-146. All high speed (173 RPM) model 14, 16 and 30 actuators will be modified. The modification consists of removing the locking disc and replacing the 10-24 set screws with 5/16 UNF set screws. Mike Cooper of Rotork will do the modification with assistance from Construction. Modifications for Unit 1 will be completed by Unit 1 fuel load. All Unit 2 and spare actuators will be completed by October 1, 1984.

The larger set screws are being incorporated into Rotork's design for all 14, 16 and 30 NAT model actuators.

Catawba is the only station with these types of actuators.