DUKE POWER COMPANY
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July 8, 1983

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
Unit 2
Docket No. 50-414

Dear Mr. O'Reilly:

Pursuant to 10 CFR 50.55e, please find attached a Final Response to Significant Deficiency Report SD 414/83-08.

Very truly yours,

Hal B. Tucker

Hal B. Tucker

RWO/php
Attachment

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

NRC Resident Inspector
Catawba Nuclear Station

Palmetto Alliance
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DUKE POWER COMPANY
CATAWBA NUCLEAR STATION
SIGNIFICANT DEFICIENCY
(FINAL REPORT)

REPORT NUMBER: SD 414/83-08

REPORT DATE: July 8, 1983

FACILITY: Catawba Nuclear Station, Unit 2

IDENTIFICATION OF DEFICIENCY: A tack weld was found on the shaft/rotor assembly of a motor used on a Limitorque operator, which was installed on a Class 1 Kerotest valve. The deficiency was identified on February 2, 1983.

INITIAL REPORT: Initial report was made to Greg Nejfelt, Region II NRC, on April 15, 1983 by Messrs. J. K. Berry, H. E. Edwards and C. A. Bell, of Duke Power Company, Charlotte, NC 28242.

COMPONENT AND SUPPLIER: Reliance motor, S/N 716251-PB. The motor was mounted on a model SMB-000 Limitorque operator, S/N 244815 and installed on a Kerotest item 9J-510 valve.

DESCRIPTION OF DEFICIENCY: The deficiency was found during inspection of the valve/operator per Construction procedure CP-168. During this inspection, a tack weld was found where the shaft connects to the rotor in the motor of the Limitorque operator. A feeler gauge indicated a space of 0.005" between the shaft and rotor. The standard assembly procedure for a Reliance shaft/rotor assembly is a press fit of these parts. The tack weld of the shaft to the rotor is a departure from standard Reliance assembly procedures and violates the operator qualification by type test.

ANALYSIS OF SAFETY IMPLICATIONS: The valve application is active Class 1E. Although no failure has occurred, the non-standard construction of the shaft/rotor was considered a possible violation of the qualifications of this valve operator.

CORRECTIVE ACTION: The motor was returned to Reliance Electric for inspection and evaluation. The Quality Assurance Department at Reliance Electric confirmed the presence of tack welds on the rotor/shaft and the gap between rotor and shaft.

The gap was caused by the broach, used to size the shaft hole, which has a tendency to extrude end laminations as it exits the rotor. This condition has never compromised the bond between rotor and shaft. The tack welds were inspected and

Reliance determined that the welding was not done by Reliance during motor manufacturing. Duke Quality Assurance is investigating to try to determine the source of the tack welds. On rare occasions Reliance will tack weld the shaft rotor as an extra assurance, but did not do so on this motor. The tack welds do not compromise motor function.

Reliance tested the motor and found the runout and balance was good, with no distortion or damage to the motor. The motor is suitable for its intended (active, Class 1E) service. Reliance replaced the rotor and shaft and will return the motor to Duke for use in the valve operator. Reliance will keep the rotor and shaft for reference.

Given the results of the Reliance investigation, Duke no longer classifies this as a significant deficiency.