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November 12, 1982

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 413-414/82-22.

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

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

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DUKE POWER COMPANY

CATAWBA NUCLEAR STATION

DEFICIENCY REPORT

REPORT NUMBER: SD 413-414/82-22

REPORT DATE: November 12, 1982

FACILITY: Catawba Nuclear Station, Units 1 & 2

IDENTIFICATION OF DEFICIENCY:

Vendor weld deficiencies were discovered during normal inspection of retrofitting work performed by Owner on the personnel lock doors.

INITIAL REPORT:

On October 12, 1982, Mr. W. O. Henry, Mr. C. A. Bell and Mr. D. E. DeMart notified Mr. A. J. Ignatonis, USNRC Region II, of the subject deficiencies.

DESCRIPTION OF DEFICIENCY:

Weld deficiencies were discovered during normal inspection of retrofitting work being performed by the Owner on the Unit 1 & 2 personnel lock doors. The personnel locks (S/N 32360, 32385, 32290 and 32335) were fabricated and stamped in accordance with the 1971 ASME Boiler and Pressure Vessel Code, Subsection NE, Summer of 1972 Addenda, by Lamco Industries, Inc. as subcontractor to the designer and primary contractor, W. J. Woolley Company.

The deficiencies basically consist of weld undercut, incomplete fusion and several arc strikes on stiffener, hinge and sill plate to door pressure plate welds. The sill plate welds are full penetration with reinforcing fillets. The stiffener and hinge plate welds are 3/8" and 1/2" fillet welds. These welds are code classified as non-category non-butt weld T-joints that would have been required to pass MT, PT or UT examination during original fabrication (NE-5232). The field inspection was carried out with the doors in a painted condition.

ANALYSIS OF SAFETY IMPLICATIONS:

The personnel air locks have been pneumatic tested to a pressure fifteen (15) percent greater than the specified design pressure. In addition, plant technical specification call for semi-annual testing to this same level. Thus, structural problems that may be precipitated by any of the aforementioned

weld conditions would in all probability be detected.

A review of the stress report for the personnel locks indicates that the welds in question are overdesigned by a minimum factor of 10 with respect to Code allowables. Additionally the door pressure plate is overdesigned by over seventy (70) percent based on allowable stresses. Thus with respect to failures the margins of safety are even greater. The depths of the deficient features in question are all within the tolerances resulting from the minimum thicknesses or sizes based on ASME Code minimum allowable stresses.

Based on the above considerations, it is our conclusion that the weld deficiencies in question, were they to have remained uncorrected, would not have adversely affected the safety of operations at the Catawba Station for the plant design bases.

CORRECTIVE ACTION:

Corrective action will be to repair all deficiencies in questions in accordance with Section XI of the ASME Boiler and Pressure Vessel Code. This work will be complete by July 29, 1983.