

DUKE POWER COMPANY

P.O. BOX 33189

CHARLOTTE, N.C. 28242

HAL B. TUCKER
VICE PRESIDENT
NUCLEAR PRODUCTION

TELEPHONE
(704) 373-4531

35 FEB 26 P 2:54
February 22, 1985

Dr. J. Nelson Grace, 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 Significant Deficiency Report
No. SD 414/85-02.

Very truly yours,

H.B. Tucker
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

8503120346 850222
PDR ADOCK 05000414
S PDR

OFFICIAL COPY

T. E. T. 11

CATAWBA NUCLEAR STATION
INTERIM REPORT

REPORT NUMBER: SD 414/84-02

REPORT DATE: February 22, 1985

FACILITY: Catawba Nuclear Station Unit 2

IDENTIFICATION OF DEFICIENCY:

While performing a preservice inspection on the shell to upper-head weld on Safety Injection Accumulator Tank 2D, Babcock & Wilcox discovered multiple rejectable indications. Due to this discovery and rejection by Babcock & Wilcox, Duke radiographed the tank weld in question which was made by Southwest Fabricating and Welding Company, a Westinghouse sub-vendor. The subsequent radiograph, divided into 34, 12" intervals, yielded 31 intervals rejectable due to possible slag in the fill of this vendor weld. Examination of radiographs determined that slag may possibly be present in 4-5% of weld thickness in 33-34% of weld length. This was reported as Duke Nonconforming Item (NCI) 19227.

INITIAL REPORT:

On January 25, 1985, C. Burger, NRC Region II, Atlanta, GA was notified of this deficiency by L. M. Coggins, D. M. Collings and T. L. Utterback of Duke Power Company, P. O. Box 33189, Charlotte, N. C. 28242.

COMPONENT AND/OR SUPPLIER:

Safety Injection System Accumulator tank

Supplier: Westinghouse Electric Corporation
Haymaker Road/Northern Pike
Pittsburgh, PA 15230

Manufacturer: Southwest Fabricating and Welding
7525 Sherman Street
Houston, Texas 77261

DESCRIPTION OF DEFICIENCY:

The accumulators are part of the Safety Injection System (SIS), which provides emergency core and containment cooling in the event of a pipe break in either the primary Reactor Coolant or secondary Main Steam system. In the worst of these cases, rapid depressurization of the Reactor Coolant system occurs and the SIS provides rapid injection of the tank contents (borated water) when the reactor coolant pressure drops below the tank cover gas pressure.

The weld containing the indications joins the shell to the hemispherical upper-head. Both the shell and head are made from SA-264 composite material consisting of SA-537 Class 1 base steel with 5/32" SA-240 Type 304 cladding. The minimum composite thickness of the head is 0.95 inches and the minimum composite thickness of the shell is 1.88 inches.

ANALYSIS OF SAFETY IMPLICATIONS:

A fracture evaluation was performed by the Westinghouse Materials Technology Group to determine the safety significance of these indications. This evaluation concluded that even in the worst case, where the indications are assumed to extend to the inside surface and to be continuous around the vessel, sufficient safety margin exists to preclude tank failure. In any case, there would be a leak before break condition.

CORRECTIVE ACTION AND STATUS:

A review of vendor's radiographs, along with subsequent ultrasonic inspection, revealed indications on other SIS Accumulator Tank welds. Further examination of these indications by Duke and Southwest personnel has determined that some of these, including those on tank 2D, may actually be gaps in the shell to cladding bond, which would have no impact on the structural integrity of the vessel. A complete evaluation will include examination from the inside of the tanks, which will be complete by March 15, 1985. Duke will then schedule any repair work which is needed, and issue another report by March 26, 1985. This problem is also being investigated for Catawba Unit 1, the only other unit on the Duke System with tanks fabricated by Southwest Fabricating.