

DUKE POWER COMPANY

POWER BUILDING

422 SOUTH CHURCH STREET, CHARLOTTE, N. C. 28242

WILLIAM O. PARKER, JR.
VICE PRESIDENT
STEAM PRODUCTION

July 10, 1981

TELEPHONE: AREA 704
373-4083

Mr. James P. O'Reilly, Director
U. S. Nuclear Regulatory Commission
Region II
101 Marietta Street, Suite 3100
Atlanta, Georgia 30303

Re: Catawba Nuclear Station
Unit 1
Docket No. 50-413



Dear Mr. O'Reilly:

Pursuant to 10CFR 50.55e, please find attached Significant Deficiency Report SD 413/81-13.

Very truly yours,

William O Parker Jr
William O. Parker, Jr. *by WATT*

RWO:ls
Attachment

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

Resident Inspector
Nuclear Regulatory Commission
Catawba Nuclear Station

IE27
S
1/1

Report Number: SD 413/81-13

Report Date: July 10, 1981

Facility: Catawba Nuclear Station - Units 1 & 2

Identification of Deficiency

During Code MT of a 4" butt weld in the NF Systems, a linear indication was picked-up in the base metal. Further investigation disclosed other indications on the pipe and that at least one of them encroached on material specification minimum wall. On this basis, Non-conforming Item Report 11,837 was generated.

Initial Report

On June 11, 1981, Mr. J. Bryant of NRC Region II, Atlanta, Georgia was notified of the deficiency by Mr. W. O. Henry of Duke Power Company, Charlotte N.C. 28242. This notification was as a result of Potentially Reportable Item CA-81-21.

Supplier and/or Component

The material in question is 4" Sch. 40 Smls. Carbon Steel Pipe to ASME SA-106 Grade B. Heat Number N-76739. Pipe was manufactured by U.S. Steel Corporation and supplied to Duke Power by Hub Incorporated of Greensboro, N.C.

Description of Deficiency

Further investigation of the indications revealed that in three cases there was localized violation of minimum wall. The deepest of these resulted in a remaining wall thickness of .175" as opposed to the material specification minimum of .207".

We found no unique cause to which these indications might be attributed. They appear to be the normal seams, laps or tears which are inherent to some degree in all carbon steel pipe.

Report Number: SD 413/81-13

Report Date: July 10, 1981

Analysis of Safety Implications

A check was made and none of this heat of pipe was found at Oconee, McGuire, or Cherokee.

Review of our records at Catawba indicated that all of this heat except 8' (found in the Fab. Shop) had been installed. Our records indicate that this pipe has been installed in the following safety-related Systems with design conditions as listed:

<u>SYSTEM</u>	<u>DESIGN CONDITIONS</u>
RN-Nuclear Service Water	165 psia @ 150°F
WZ-Groundwater Drainage	75 psia @ Amb.
KD-Diesel Generator Cooling Water	125 psia @ 250°F
NF-Ice Condenser	225 psia @ 150°F
VQ-Containment Air	30 psia @ 260°F
VY-Containment Hydrogen	40 psia @ 220°F
YC-Chilled Water	275 psia @ 100°F
KC-Component Cooling	150 psia @ 200°F

Using the highest design conditions above the Code minimum wall required is .041"

Based on our investigation of typical defects and a statistical evaluation, there is a 95% confidence level that if all indications were examined, 95% would result in a remaining wall thickness of .122" or greater. Comparing the .122" expected minimum to the required .041 Code minimum gives us margin of 3 to 1 in addition to the safety factor of approximately 4 already built into the Code.

Based on these considerations, the pipe is acceptable for the intended service.

Corrective Action

No further action is required as far as this particular pipe is concerned. Reassessment will be made of our Inspection Programs to insure that such problems are screened upon Receipt Inspection.