

DUKE POWER COMPANY  
POWER BUILDING

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

82 JUN 3 A 8:03

WILLIAM O. PARKER, JR.  
VICE PRESIDENT  
STEAM PRODUCTION

May 27, 1982

TELEPHONE AREA 704  
373-4083

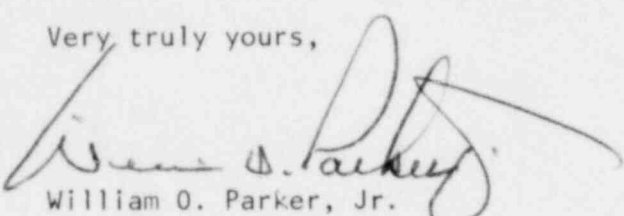
Mr. James P. O'Reilly, Regional Administrator  
U. S. Nuclear Regulatory Commission  
Region II  
101 Marietta Street, Suite 3100  
Atlanta, Georgia 30303

Re: Catawba Nuclear Station  
Units 1 and 2  
Docket Nos. 50-413 and -414

Dear Mr. O'Reilly:

Pursuant to 10 CFR 50.55e, please find attached Significant Deficiency  
Report SD 413-414/82-11.

Very truly yours,

  
William O. Parker, Jr.

RW0/php  
Attachment

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

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

Mr. Robert Guild, Esq.  
Attorney-at-Law  
314 Pall Mall  
Columbia, South Carolina 29201

Palmetto Alliance  
2135½ Devine Street  
Columbia, South Carolina 29205

OFFICIAL COPY

6110298 820527  
PDR ADOCK 05000413  
S PDR

1827

## CATAWBA NUCLEAR STATION

REPORT NO: SD 413-414/82-11

REPORT DATE: May 27, 1982

FACILITY: Catawba Nuclear Station  
Units 1 & 2

IDENTIFICATION OF DEFICIENCY: The code required reinforcing fillet weld on pipe-to-pipe nozzle welds was found to be undersized after prior inspection had warranted them acceptable.

INITIAL REPORT: On April 28, 1982, Mr J C Bryant of NRC Region II, Atlanta, Georgia, was notified of this deficiency by Mr W O Henry and Mr L M Coggins of Duke Power Company, Charlotte, NC 28242. This notification was in response to Non-Conforming Item #14,524.

DESCRIPTION OF DEFICIENCY: During routine inspection of a piping system, the code required reinforcing fillet weld on a branch connection was found to be undersized. Subsequent investigation disclosed that other welds which had already been signed off were undersized also.

ANALYSIS OF SAFETY IMPLICATION: At this time, three (3) factors have caused this item to be deemed reportable.

1. The large diameter of some pipe-to-pipe nozzles increases the consequences of a failure.
2. In pipe-to-pipe nozzle welds, there is no heavy coupling present with built in reinforcement.
3. The code rules for analysis of this type of branch connection does not take credit for the code specified reinforcing fillet welds. Thus, we have no readily available analytical tool to use to say that the undersize weld means lower strength, but it is still acceptable.

A list of all pipe-to-pipe branch connections is now being prepared. Once this list is compiled, all ASME Code pipe-to-pipe nozzle welds will be reinspected. The fillet size will be measured and recorded. All recordings will be forwarded to Design Engineering for further investigation and analysis to justify or verify the acceptability of these welds, and the consequence of the undersize had they gone undetected.

CORRECTIVE ACTION: All craft and QC personnel have been retrained in the proper requirements for fillet size. This training has included a discussion of Construction Procedure 427 and drawing series CN-1676-1 which contain the necessary information on fillet weld size.

Based upon the Design analysis, a decision will be made as to which welds require weld metal build-up.

All necessary weld build-up will be completed by November 1, 1982. The Design Engineering analysis of the consequences had this gone undetected will be completed by December 1, 1982.