

DUKE POWER COMPANY

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HAL B. TUCKER

VICE PRESIDENT

NUCLEAR PRODUCTION

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84 JUN 5 12:23 May 29, 1984

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  
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  
No. SD 413-414/84-12.

Very truly yours,

*H. B. Tucker*

Hal B. Tucker

LTP/php

Attachment

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

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Catawba Nuclear Station

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DUKE POWER COMPANY  
CATAWBA NUCLEAR STATION

REPORT NUMBER: SD 413-414/84-12

REPORT DATE: May 29, 1984

FACILITY: Catawba Nuclear Station  
Units 1 & 2

IDENTIFICATION OF DEFICIENCY:

To accommodate thermal movements and to prevent overstressing the load bolt and/or to prevent the spherical bearing from disengaging, the installed "S" dimension for clamps installed with Figure 306/307 snubbers and struts must be maintained with a given tolerance. Due to inadequate manufacturer's installation guidelines, construction procedures required to maintain this fit were not implemented until 1-20-84.

An investigation/evaluation determined that approximately 165 Unit (1) & 42 (Unit 2) Bergen-Paterson clamps (Part #6202-1.5) installed prior to construction procedures being implemented had suspect "S" dimensions. This problem was officially documented by NCIR #18294 on 4-4-84.

INITIAL REPORT:

On May 2, 1984, Virgil Brownlee, NRC Region II, Atlanta, Georgia was notified of the deficiency by J. L. Ritchie, R. Carroll, and T. L. Utterback of Duke Power Company, Charlotte, North Carolina.

COMPONENT AND/OR SUPPLIER:

Bergen Paterson Clamp (Part #6202-1.5)

DESCRIPTION OF DEFICIENCY:

To prevent 1 KIP Figure 306/307 Mechanical snubber load pin spherical bearings from becoming disengaged, 3/4" thru 3" Bergen-Paterson pipe clamps (Part # 6202-1.5) must be installed such that the spacer washers (one on each side of bearing) and the spherical bearing fit tight between the clamp ears or such that the "S" dimension is no greater than 0.84375 (either fit is acceptable). The "S" dimension is the distance between clamp halves at the load pin. Design Dwg. CN-1684-00-MAT-2 Revisions 2 and 3, which details this criteria, has been issued to Construction.

This "S" dimension was not maintained by the craft or inspected by QA until Construction Procedure CP-385 was revised to incorporate this requirement on 1-20-84. This problem was identified on NCIR #18294 dated 4-4-84. A subsequent investigation by Construction Technical Support revealed that only 13 clamps (12 Unit (1) & 1 Unit (2)) had installed "S" dimensions which would allow spherical bearings to potentially become totally disengaged.

ANALYSIS OF SAFETY IMPLICATIONS:

The consequences of complete disengagement of the spherical bearing would be to invalidate the original analytical assumptions used in the piping system analysis, potentially creating an overstress condition in the piping system or overloading the supports. This would be more significant for the seismic event since it would change the dynamic characteristics of the piping system and lead to impact loads that may damage the piping or supports and adversely affect safety of operation.

CORRECTIVE ACTION:

Construction procedure CP-385 and QA Form M51E (Serial #CN1) used to dimensionally verify component supports has been revised to now require the "S" dimension be verified to be in accordance with Design Dwg. CN-1684-00-MAT-2 on all future installations.

The "S" dimensions of all 165 Unit (1) & 42 Unit (2) clamps installed prior to CP-385 & form M51E being revised have been inspected by Construction and QA. The 13 clamps with unacceptable "S" dimensions have been adjusted and are now in accordance with CP-385, Form M51E & Design Dwg. CN-1684-00-MAT-2.

Based upon the foregoing Analysis of Safety Implications, this problem could have adversely affected safety of operation. However, all deficient clamps have now been verified to be in compliance with the above noted procedures and drawings.