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**DUKE POWER**

November 01, 1994

U. S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, DC 20555

Subject: Catawba Nuclear Station, Unit 2  
Docket No. 50-413 and 50-414  
Special Report  
Cathodic Protection System

Pursuant to Technical Specification 3.8.1.1 ACTION Statement "g" and 6.9.2, find attached a Special Report concerning the inoperability of the Unit 2 Cathodic Protection System. The system was declared inoperable on September 22, 1994, and remained inoperable greater than 10 days.

Sincerely,

*Mark E. Patrick for*

DL Rehn

KEN/SR110194.CAT

Attachment

xc: SD Ebnetter, Region II

RE Martin, ONRR

RJ Freudenberger, SRI

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U. S. Nuclear Regulatory Commission  
November 01, 1994  
Page 2

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BJ Horsley	EC12T
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KE Nicholson	PIP 2-C94-1379

**SPECIAL REPORT**  
**CATAWBA NUCLEAR STATION**  
**CATHODIC PROTECTION SYTEM INOPERABLE**  
**50-413, 50-414**

On September 22, 1994, Instrument and Electrical (IAE) technicians began the routine 60 day surveillance test on the Unit 1 and 2 Diesel Piping Cathodic Protection System. Unit 1 piping passed the acceptance criteria of IP/0/B/3550/01, Cathodic Protection Testing Procedure. Unit 2 had several Test Stations (TS 19, 40, 41) which were below the acceptance criteria. The technicians proceeded to the alternate test method, a milivolt drop test, which called for the rectifier to be turned off. Rectifier #3 was turned off, declared inoperable and left deenergized over the weekend. On September 26, 1994, the voltage of Test Station 19 was again measured and did not pass the acceptance criteria.

Work Order (WO) 94074060-01 was initiated to investigate and repair the cause of the failure. It was discovered that no power was present on the majority of anode wells that are supplied by Rectifier #3. However, there was voltage and current present on Anode Wells 14 and 8, and Prepackaged Anode Well #6, which are in the immediate area of the Test Stations. Prepackaged Anode Well #1, which is in direct vicinity of Test Station 19 could not be checked due to its cabling being buried underground. WO 94074060-01 will be worked to restore power to the other anode wells connected to Rectifier #3. It was concluded that the inadequate reading at Test Station 19 could be due to either deterioration of Test Station 19 or failure of Prepackaged Anode Well #1.

Several years of data on Rectifier #3 Test Station readings was compiled to determine if any trends had developed. It was noted that readings for Test Stations 41 and 19 mirrored each other and that they both took a drastic drop during the last 60 day surveillance. These two Test Stations are next to each other with Prepackaged Anode Well #1 directly in between them. There is no method available to measure whether Prepackaged Anode Well #1 is working. However, this data supports that Prepackaged Anode Well #1 has failed.

The only section of the Diesel Generator (D/G) piping which does not meet the acceptance criteria of the surveillance procedure is that piping in the area of Test Station 19. The piping in this area belongs to the D/G Engine Fuel Oil System, D/G Engine Lube Oil System and the D/G Room Sump Pump. Rectifier #3 remains on, with some protection being provided to this area by other anode wells.

WO # 94080948-01 has been initiated to replace Prepackaged Anode Well #1. This work order is scheduled for November 14, 1994. The replacement of this prepackaged anode well is expected to return Test Station 19 to above its required value.