



830 Power Building

TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401

*Central File
50-296*

MAY 24 1976

Mr. Norman C. Moseley, Director
Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
Region II - Suite 818
230 Peachtree Street, NW.
Atlanta, Georgia 30303

Dear Mr. Moseley:

BROWNS FERRY NUCLEAR PLANT UNIT 3 - REPORTABLE DEFICIENCY -
CLOGGED COOLING WATER LINES TO RHR AND CORE SPRAY PUMP
MOTOR BEARING COOLERS

Initial report of the subject reportable deficiency was made to G. R. Klingler, NRC-IE, Region II, on April 22, 1976. In compliance with paragraph 50.55(e) of 10 CFR Part 50, we submit the enclosed interim report of the deficiency. A final report will be submitted when plans to correct this deficiency are completed and approved.

Very truly yours,

J. E. Gilleland
J. E. Gilleland
Assistant Manager of Power

Enclosure

CC (Enclosure):

Dr. E. Volgenau, Director
Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
Washington, DC 20555

ENCLOSURE

BROWNS FERRY NUCLEAR PLANT UNIT 3 CLOGGED COOLING WATER LINES TO RHR AND CORE SPRAY PUMP MOTOR BEARING COOLERS

DDR 230

INTERIM REPORT

On April 22, 1976, an initial report was made by telephone to NRC-OIE Inspector, G. R. Klinger, by T. W. Barkalow and S. H. Mindel. The report was made in compliance with 10CFR50.55(e). This is an interim report. A final report will be submitted once final plans to correct the deficiency are completed.

Description of Occurrence

While conducting preoperational test TVA-4, the actual flow rates in the emergency equipment cooling water (EECW) lines to the RHR and core spray pump motor bearing coolers were found to be below those required by the test. An investigation revealed these lines to be clogged with mud and scale. The lines involved had diameters of either 3/8 inch or 1 inch.

Cause of the Deficiency

The EECW system is only used during tests or when equipment it services is operated. Therefore, the cooling water lines contain stagnant water for long periods of time. Since the EECW source is raw water from Wheeler Reservoir, the stagnation leads to settlement of suspended solids and clogging in sections of lines at the lower elevations. The system does have strainers, but they have been ineffective in dealing with silty water. Also, a few lines contained asiastic clams which were all of about the same size. This indicates that they may be able to grow in the system between flushings with chlorinated water.

Safety Implications

The EECW system provides cooling water to the standby diesel generators, RHR and core spray equipment room environmental coolers, RHR pump seal coolers, and core spray thrust bearing coolers. Lines to the latter two coolers were found to be clogged. These lines are the smallest lines in the system and, therefore, are the easiest to clog. Complete plugging of these lines would prevent cooling water from circulating through this part of the system. However, temperature measurements indicated in the control room verify whether each cooler or heat exchanger in the affected unit area is receiving adequate flow of cooling water. Inadequate flow could eventually lead to failure of the core spray pumps and the RHR pumps.

Description of Corrective Action

All the check valves in the clogged sections of the lines were removed and thoroughly cleaned. The lines were then backflushed through the coolers. Tests conducted after the lines were reassembled showed adequate flow in all but one line to a core spray pump motor bearing cooler. This line will be disassembled and reflashed to remove any remaining blockage.

Means Taken to Prevent a Recurrence

Final plans to correct this deficiency have yet to be completed and approved.