

DUKE POWER COMPANY

POWER BUILDING

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

WILLIAM O. PARKER, JR.
VICE PRESIDENT
STEAM PRODUCTION

December 11, 1981

USNRC REGION II
ATLANTA, GEORGIA
31 DEC 18 4 48 PM '81
TELEPHONE AREA 404
373-4093

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

Re: McGuire Nuclear Station Unit 1
Docket No. 50-369



Dear Mr. O'Reilly:

Please find attached Reportable Occurrence Report RO-369/81-178. This report concerns T.S.3.5.1.2, "Each upper head injection accumulator shall be operable with: ...c. The nitrogen bearing accumulator pressurized to between 1206 and 1264 psig." This incident was considered to be of no significance with respect to the health and safety of the public.

very truly yours,

William O. Parker, Jr.
William O. Parker, Jr.

PBN/jfw
Attachments

cc: Director
Office of Management and Program Analysis
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Records Center
Institute of Nuclear Power Operations
1820 Water Place
Atlanta, Georgia 30339

Mr. P. R. Bemis
Senior Resident Inspector-NRC
McGuire Nuclear Station

8112240235 811211
PDR ADOCK 05000369
S PDR

OFFICIAL COPY

Te 22

DUKE POWER COMPANY
McGUIRE NUCLEAR STATION
REPORTABLE OCCURRENCE REPORT NO. 81-178

REPORT DATE: December 11, 1981

FACILITY: McGuire Unit 1, Cornelius, NC

IDENTIFICATION: Upper Head Injection (UHI) Accumulator Pressure Decreased to Tech Spec Limit

INTRODUCTION: On November 13, 1981 the "UHI Surge Tank Hi/Lo Pressure" alarm annunciated in the control room. The alarm indicated that the UHI system pressure had decreased to the Technical Specification 3.5.1.2 setpoint of 1206 psig. The exact cause of the pressure decrease could not specifically be determined but contributing factors were the packing leakoffs from four UHI block valves on the UHI water accumulator. The nitrogen bottles were aligned to the UHI nitrogen accumulator, and the low pressure alarm was cleared. Prior to the incident, Unit 1 was at 48% power and the UHI surge tank level was approximately 50%.

EVALUATION: During plant operation, packing leakoffs on the block valves cause a level decrease in the surge tank and eventually a pressure decrease in the UHI system. Consequently, water is routinely added to the surge tank to increase the level. Prior to the incident, it is possible that the UHI pressure was close to the alarm setpoint and the surge tank level decreased sufficiently to cause the low UHI pressure alarm to annunciate. It has been difficult to accurately monitor UHI system pressure because the 58 psig operating band (1206-1264 psig) must be read on a gage with a range of 0-2000 psig. After the alarm was received, the nitrogen system was aligned in preparation for repressurizing the UHI nitrogen accumulator. No water was added since the surge tank level was approximately 50%.

CORRECTIVE ACTION: An operator immediately aligned nitrogen to the UHI system and repressurized the nitrogen accumulator. A subsequent investigation for leaks on instrument lines and from vent valves was hindered because the UHI nitrogen accumulator is located in a presently roped off High Radiation Area. However, no nitrogen leaks were discovered on instrument lines on the UHI surge tank or from vent valves on the piping containing the rupture diaphragm. Thus, it could not be determined specifically if the packing leakoffs on the block valves were the sole cause of the incident. The investigation will be continued when the nitrogen accumulator is accessible.

In order to provide more complete indication of UHI system pressure in the control room, three modifications are planned: one is to provide an analog computer point for the UHI pressure. If a UHI hi/lo pressure alarm should occur, the computer point will indicate exactly what the UHI pressure is. Another changes the hi/lo pressure alarm setpoints from the present Tech Spec limits of 1206 and 1264 psig to 1215 and 1255 psig. This will give the operators sufficient time to adjust pressure without challenging the Tech Spec requirements. Finally, the range of one of the two UHI pressure gages in the control room will be changed from 0-2000 psig to 1000-1500 psig. This will allow the control room operators to more easily ascertain UHI pressure because of better gage resolution.

VERIFICATION: After the nitrogen was aligned to the UHI nitrogen accumulator, the pressure was returned to the normal operating band within approximately twenty minutes. The implementation of the modifications will provide more complete UHI system pressure indication and enable the control room operators to more quickly react to abnormalities should they occur.

SAFETY ANALYSIS: The UHI system is passive and would only be used if a large reactor coolant system break occurs. Even though the UHI pressure decreased to the Tech Spec low limit, the system was still operable and could have been used if an emergency had occurred. However, no break occurred and safe plant operation and the health and safety of the public were unaffected by this incident.