

DUKE POWER COMPANY

POWER BUILDING

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

WILLIAM O. PARKER, JR.
VICE PRESIDENT
STEAM PRODUCTION

September 18, 1981

TELEPHONE: AREA 704
373-4083

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
Dock No. 50-369



Dear Mr. O'Reilly:

Please find attached Reportable Occurrence Report RO-369/81-142. This report concerns T.S.3.3.3.6, "The Accidents Monitoring Instrumentation Channels Shown in Table 3.3-10 Shall Be Operable." 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/smh

Attachment

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

Mr. Bill Lavalley
Nuclear Safety Analysis Center
Post Office Box 10412
Palo Alto, California 94303

Ms. M. J. Graham
Resident Inspector-NRC
McGuire Nuclear Station

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McGUIRE NUCLEAR STATION

REPORTABLE OCCURRENCE

REPORT NUMBER: 81-142

REPORT DATE: September 18, 1981

OCCURRENCE DATE: August 19, 1981

FACILITY: McGuire Unit 1; Cornelius, N.C.

IDENTIFICATION OF OCCURRENCE: Both Channels of the Post-Accident Containment Sump Level Instrumentation indicated water levels when no water was in the sump, and were subsequently declared inoperable. The incident is reportable under the provisions of Technical Specification 3.3.3.6.

CONDITION PRIOR TO OCCURRENCE: Mode 2, Startup; conducting low power testing.

DESCRIPTION OF OCCURRENCE: Technicians found that the zero level outputs of the Barton, Model 386 transmitters varied with the bellows sensor housings installed and removed. The bellows were noted to be expanded excessively such that the walls of the housing prevented the free movement of the bellows.

APPARENT CAUSE OF OCCURRENCE: The zero level outputs of the containment sump level transmitters had shifted and caused the transmitters to be out of calibration over their entire range.

ANALYSIS OF OCCURRENCE: The instruments were functioning in a much higher temperature environment than the original installation conditions; this caused the fluid filled bellows assembly to expand and contact the housing walls.

SAFETY ANALYSIS: This was a common cause failure of accident monitoring instrumentation. The transmitters involved provide no safety related function and are not necessary for accident mitigation; therefore, the inoperability of this equipment had no effect on safe plant operation, or the health and safety of the public. The operability of accident monitoring instrumentation ensures that sufficient information is available on selected plant parameters to monitor and assess the variables following an accident. The containment sump level transmitters failed at near normal containment operating conditions. The question rises as to whether these instruments can survive the extreme conditions postulated for a post-accident environment. The matter has been referred to Duke Power Company Design Engineering Department for further analysis and determination of the necessity for a nuclear station modification considering the immediate corrective action that was taken.

CORRECTIVE ACTION: The interiors of the sensor bellows housings were bored or machined down to a tolerance necessary for the free movement of the bellows. This action proved successful in relieving the interference problem. The instruments were then recalibrated and placed back in service on August 21, 1981.