DUKE POWER COMPANY
POWER BUILDING
422 SOUTH CHURCH STREET, CHARLOTTE, N. C. 28242

WILLIAM O. PARKER, JR.
VICE PRESIDENT
STEAM PRODUCTION

TELEPHONE: AREA 704
373-4083

August 3, 1981

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-369/81-107. This report concerns Technical Specification 3.3.3.6, "The accident 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,

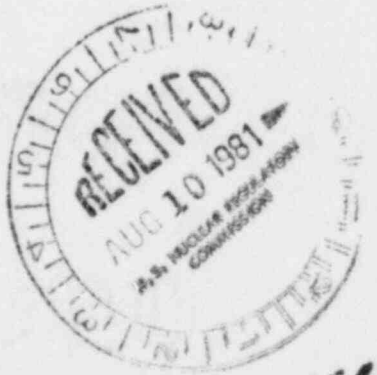
William O. Parker, Jr.

PBN:krh
Attachment

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

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

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



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McGUIRE NUCLEAR STATION
REPORTABLE OCCURRENCE

REPORT NUMBER: 81-107

REPORT DATE: August 3, 1981

OCCURRENCE DATE: July 4, 1981

FACILITY: McGuire Unit 1, Cornelius, NC

IDENTIFICATION OF OCCURRENCE: The Auxiliary Feedwater Flow Rate Instrumentation for Accident Monitoring was declared inoperable.

CONDITION PRIOR TO OCCURRENCE: Mode 4, Hot Shutdown

DESCRIPTION OF OCCURRENCE: On July 4, 1981, Control Room personnel found that the Auxiliary Feedwater flow gauges for Steam Generators (S/G) "C" and "D" were defective. Their indicating pointers (needles) were missing, and thus these flow monitoring devices were declared inoperable. A work request was immediately initiated to repair and calibrate the instruments. On July 6, 1981, the plant entered mode 3 from mode 4; hence, this became a reportable incident pursuant to Technical Specification 3.3.3.6.

APPARENT CAUSE OF OCCURRENCE: The S/G's "C" and "D" Auxiliary Feedwater Flow Monitoring Instruments became inoperable because an external source (600 volts) tied into the instrument loops. This caused the loops' power supply, transmitters (Barton, Model 386A), and indicators to fail.

ANALYSIS OF OCCURRENCE: S/G's "C" and "D" Auxiliary Feedwater Flow instrumentation loops share a common power supply. Each of the flow transmitters receives an input of 48V DC from this source and delivers an output of 4-20 milliamperes to its respective indicator. On July 4, 1981, Control Room personnel noticed that the needle on each flow indicator was missing. They were declared inoperable and a work request was initiated for their repair and calibration. The needle on the "C" loop indicator was found to be bent and the "D" loop's was broken. The flow transmitters had burned resistors on their circuit board, and their common power supply was also burned. It was discovered that a wire connection tied one phase of the 600V AC source of valve 1KC18B through the instrument loop to ground. The loop was recently grounded as a part of the corrective maintenance from a previous flow instrument failure. When valve 1KC18B was operated its 600V source apparently made a continuous path through the instrument loops causing the damage to the equipment.

SAFETY ANALYSIS: The auxiliary feedwater flow transmitters are used to provide indication for accident monitoring. They do not provide controls or interlocks to the pumps and valves of the Auxiliary Feedwater System. If the plant had been in normal operation, and a normal or abnormal shutdown was required, the inoperability of these instruments would not have affected the Auxiliary Feedwater System in providing its necessary function. Therefore, the plant's safe operation and the health and safety of the public were not affected by this indicent.

CORRECTIVE ACTION: A modification was initiated to remove the wire connection. The "C" and "D" loops' transmitters and indicators were replaced and calibrated per procedures "I.T.T. Barton 386A, 763A and 764A Transmitter Calibration" and "Barton Replacement and Re-Installation". The instrumentation loops' power supply was replaced. The Auxiliary Feedwater Flow Rate Instrumentation was declared operable on July 10, 1981.