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

March 4, 1981

Mr. James 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-369/81-10. This report concerns low RHR flow due to a broken air supply line. 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.

RWO:scs
Attachment

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

Mr. Bill Lavallee
Nuclear Safety Analysis Center
P. O. Box 10412
Palo Alto, California 94303

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MCGUIRE NUCLEAR STATION
INCIDENT REPORT

Report Number: RO-369/81-10

Report Date: February 25, 1981

Occurrence Date: February 7, 1981

Identification of Occurrence: On February 7, 1981 at 1604 Hours, Residual Heat Removal (ND) Flow was Found to be About 1500 GPM.

Condition Prior to Occurrence: Mode 6 Initial Fuel Loading

Description of Occurrence:

During routine surveillance on February 7, 1981, the control operator discovered total ND flow return at about 1500 GPM rather than the 3000 GPM required by Technical Specification 4.9.8.1. He then re-adjusted the flow to 3000 GPM.

Apparent Cause of Occurrence:

About 0300 hours, on February 7, 1981, the ND system was in operation with ND Pump 1-B running and supplying water to both trains through the cross-connect piping. Flow was divided about equally between trains and was controlled by valves 1-ND 14(ND Pump 1-B Discharge Flow Control) and 1-ND 29 (ND Pump 1-A Discharge Flow Control). An air line supplying the actuator on 1-ND-29 broke and allowed the valve to fail open. The operators on duty immediately isolated train A to limit ND Pump B flow and to protect the pump. 1-ND 14 was not re-adjusted to compensate for the loss of the train A flowpath until 1604 hours on February 7, 1981.

Analysis of Occurrence:

At the time of the occurrence, only new fuel was installed in the reactor so overheating, due to decay heat, was not a problem. No chemical changes were being made so mixing was also unnecessary. Since the normal functions of the ND system were not needed, the safe operation of the plant and the health and safety of the public were not affected by the reduced ND flow. In subsequent fuel loading operations, either chemical mixing or residual heat removal and fuel temperatures could be affected by low ND flow. The operating procedure for the residual heat removal system did not specifically state that 3000 GPM or greater is required during refueling, but the operators on duty were aware of the requirement. The operators apparently were so involved with responding to the immediate problem of excessive flow through ND Pump 1-B and subsequent actions to investigate and correct the failed control valve (1-ND-29), that they neglected to recheck and adjust the ND flow back-up to 3000 GPM.

Corrective Action:

The low ND flow was re-adjusted to 3000 GPM immediately on discovery. 1-ND-29 was repaired and an investigation into the vibration related air line failure was conducted. The investigation resulted in a Nuclear Station Modification to replace rigid air supply lines with flexible lines. The NSM and work request were written to replace instrument air lines on several valves with vibration problems similar to 1-ND-29.

This incident was reviewed by Operations. Supervisors agreed that shift personnel would be advised to review operating parameters as soon as possible after an event (after the immediate corrective action is complete). More frequent surveillance of a system which has experienced mechanical problems should lessen the possibility of a recurrence of this type of incident. The Operating procedure for the ND system will be modified to include a note specifying the required flow for Mode 6 (refueling) operation.