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DUKE POWER COMPANY

POWER BUILDING

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

WILLIAM O. PARKER, JR.  
VICE PRESIDENT  
STEAM PRODUCTION

May 7, 1981

TELEPHONE AREA 704  
373-4083

81-053-03L

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 R0-369/81-46. This report concerns an inspection/leak detection program being considered applicable to Loop 10-inch Accumulator Injection line contrary to the existing Licensing agreement. 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.

RWO:djs

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

Mr. Harold R. Denton, Director  
Office of Nuclear Reactor Regulation

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

M. J. Graham  
Resident Inspector  
McGuire Nuclear Station

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MCGUIRE NUCLEAR STATION

UNIT 1

REPORT NO: Incident No. 81-46

REPORT DATE: May 5, 1981

FACILITY: McGuire Nuclear Station, Unit 1

IDENTIFICATION OF DEFICIENCY: Inspection/Leak Detection Program Considered Applicable To Loop B 10-inch Accumulator Injection Line, Contrary To Existing Licensing Agreement.

INITIAL REPORT: On April 23, 1981, Mr. Jack Bryant of NRC Region II, Atlanta, Georgia was notified of this deficiency by Mr. A. P. Cobb, Jr. and Mr. Morris Sample of Duke Power Company, Charlotte, North Carolina, 28242.

DESCRIPTION OF DEFICIENCY: A deficiency occurred in implementation of the existing licensing agreement for pipe rupture protection, whereby inspection/leak detection measures were assumed for postulated breaks in Loop B 10-inch Accumulator Injection line in lieu of providing structural restraints or barriers to prevent unacceptable interactions. As such, protection for jet impingement interactions with two 1-inch Nuclear Sampling lines, one 3/4-inch Nuclear Sampling line, and one 2-inch Steam Generator Blowdown line, and an electrical cable supplying power to a containment isolation valve, has not been provided in accordance with requirements. The deficiency occurred as a result of not updating a design document to reflect the final licensing agreements reached with the NRC staff as specified in the February 9, 1979 letter from R.S. Boyd to W.O. Parker.

Unit 2 work in this area has not progressed sufficiently to have encountered this problem; however, documentation changes are required to prevent its occurrence.

ANALYSIS OF SAFETY IMPLICATION: Loss of integrity of the 3/4-inch or 1-inch Nuclear Sampling or 2-inch Steam Generator Blowdown line could result in propagation of the postulated injection line break to other loop(s) of the Reactor Coolant System, or to the Secondary Side piping, or both. Loss of functional integrity of these components, or the electrical cable providing power to the valve, in conjunction with other simultaneously postulated events could result in loss of containment integrity. Loss of the Nuclear Sampling or Steam Generator Blowdown lines as a result of the Accumulator Injection line break has been enveloped by previous analyses.

CORRECTIVE ACTION: Duke will formally implement the inspection/leak detection program for postulated pipe ruptures on the affected Loop B 10-inch Accumulator Injection lines (Loops A, C, & D). These consist of the following:

- (1) Examination of welds in accordance with frequency requirements of ASME Section XI.
- (2) Performance of additional surface examination for each weld while the system is under pressure.
- (3) Performance of volumetric examination of each weld while the system is under pressure.
- (4) Performance of hydrostatic pressure test as required by ASME Section XI.
- (5) Continuous monitoring of postulated break locations with acoustic leak detection devices to provide instant indication of any through-wall leakage (visual & audible alarm in Control Room).

The Electrical cable will be rerouted to preclude jet impingement due to postulated pipe ruptures inside Containment. Also, the design document will be revised to reflect use of inspection/leak detection program on all 10-inch Accumulator Injection lines and other applicable licensing agreements.

SCHEDULE:

The schedule for completing the above corrective action is as follows:

<u>ITEM</u>	<u>COMPLETION DATE</u>
Implement Leak Detection-Loop B	Initial Criticality
Re-route Cable	Initial Criticality
Revise Document	6/15/81

Currently initial criticality is scheduled for May 28, 1981.