

(PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

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May 27, 1983

Mr. James P. O'Reilly, Regional Administrator  
U. S. Nuclear Regulatory Commission  
Region II  
101 Marietta Street NW, Suite 2900  
Atlanta, Georgia 30303

Re: McGuire Nuclear Station Unit 2  
Docket No. 50-370

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USNRC REGION II  
ATLANTA, GEORGIA

Dear Mr. O'Reilly:

Please find attached Reportable Occurrence Report RO-370/83-11. This report concerns T.S. 3.4.4., "All power-operated relief valves and their associated block valves shall be operable"; and T.S. 3.4.9.3, "At least one of the following overpressure protection systems shall be operable: a. two power-operated relief valves...". This incident was considered to be of no significance with respect to the health and safety of the public.

Very truly yours,

*H.B. Tucker / HBT*

Hal B. Tucker

PBN:jfw  
Attachment

cc: Document Control Desk  
U. S. Nuclear Regulatory Commission  
Washington, D. C. 20555

Records Center  
Institute of Nuclear Power Operations  
1100 Circle 75 Parkway, Suite 1500  
Atlanta, Georgia 30339

Mr. W. T. Orders  
NRC Resident Inspector  
McGuire Nuclear Station

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DUKE POWER COMPANY  
McGUIRE NUCLEAR STATION  
REPORTABLE OCCURRENCE REPORT NO. 370/83-11

REPORT DATE: May 27, 1983

FACILITY: McGuire Unit 2, Cornelius, N. C.

IDENTIFICATION: Pressurizer Power Operated Relief Valve (PORV) Block, 2NC31B, Declared Inoperable Due to Packing Leakage

DESCRIPTION: On April 27, 1983, a pressurizer PORV block valve (2NC31B) was declared inoperable due to the failure of the packing gland eye bolts. This failure allowed the packing to loosen which resulted in steam traveling along the shaft and out to the containment atmosphere. The leak was secured by closing the valve to prevent steam from reaching the packing area. This valve will remain closed and inoperable until the next scheduled outage (June 1983). At that time, the gland retainer eye bolts and the packing will be replaced.

Unit 2 was in Mode 3 at the time of this occurrence.

This incident is reportable pursuant to Technical Specification 3.4.4 which requires that all PORVs and their associated block valves be operable during Modes 1, 2 and 3. The incident was a result of Component Failure/Malfunction.

EVALUATION: On 4/27/83, during the investigation of abnormal instrument readings, PORV block valves and loop drains were closed. The safety discharge temperature, the containment pressure, and the pressurizer pressure normalized. Upon opening the block valves one at a time, pertinent parameters indicated that valve 2NC31B was leaking steam past its shaft to the containment atmosphere (reactor coolant pressure ~2235 psig) when the valve was in the open position.

Valve 2NC31B (pressurizer PORV 2NC32B block) is a 3" Borg Warner gate type with a Rotork actuator. The gland retainer holds the gland, the packing, and the lantern ring in position to prevent leakage past the valve shaft. Two eye bolts are used to secure this gland retainer in place. The investigation revealed that the nut was missing from one eye-bolt. The other eye-bolt was cracked, and its swing pin was bent. Both eye-bolts had fallen away from the gland retainer which allowed the packing to loosen and permit steam to pass along the shaft. The reason for the eye-bolt failure has not been ascertained; however, it is theorized that the bolts had been unevenly torqued.

The Action Statement (b) of Technical Specification 3.4.4 required that 2NC31B be closed and power be removed from it. This caused pressurizer PORV 2NC32B to be declared inoperable. Technical Specification 3.4.4 is applicable while the Unit is in Modes 1, 2, or 3. On 5/3/83, however, Unit 2 entered Mode 4 in order to prepare for the Integrated Leak Rate Test. While the Unit was in Mode 4 or 5, the inoperability of 2NC32B was documented pursuant to the requirements of Technical Specification 3.4.9.3. The Action Statement of this specification allowed the valve

to be inoperable for seven days without action. Since the Unit was back in Mode 3 on 5/6/83, the requirements were sufficiently met.

CORRECTIVE  
ACTION:

Valve 2NC31B was closed, and the actuator was de-energized. The valve was visually verified to not be leaking after it was closed. This satisfied the Action Statement in Technical Specification 3.4.4. Valve 2NC32B was also declared inoperable. Valve 2NC31B will be repaired during the Unit 2 outage currently scheduled to begin on June 19, 1983 (expected length is 11 weeks).

SAFETY  
ANALYSIS:

The containment pressure increased to ~0.2 psig during this event; however, this did not exceed the allowable limit of  $\pm 0.3$  psig as stated in Technical Specification 3.6.1.4. Apparently, the steam release did not create a differential pressure between upper and lower containment because the ice condenser lower inlet doors did not open (set to open at a differential pressure of 1 pound per square foot). The position of these doors was visually verified immediately following the event since the Ice Condenser Door Position Monitoring System was inoperable (a faulty alarm signal was being repaired at the time).

The two remaining PORVs were operable at the time of this occurrence as were all of the pressurizer Code safety relief valves.

This incident had no affect on the health and safety of the public.