Central File
50-261

CP&L

Carolina Power & Light Company

August 2, 1976

FILE: NG-3513 (R) SERIAL: NG-76-1061

Mr. Norman C. Moseley, Director
U. S. Nuclear Regulatory Commission
Region II, Suite 818
230 Peachtree Street, N.W.
Atlanta, Georgia 30303

Dear Mr. Moseley:

H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2
DOCKET NO. 50-261
LICENSE NO. DPR-23
RESPONSE TO IE BULLETIN 76-06

We have received your IE Bulletin 76-06 transmitted with your letter of July 21, 1976, and have reviewed our plant systems in light of your requested actions. As a result, we are hereby providing the complete information you requested, and we consider it to be sufficient to fulfill the reply requirements of the Bulletin for both the ten (10) and twenty (20) day reports.

Item No. 1 requested a review of all safety-related power operated valves (PORV's) to ensure proper installation. The Robinson Plant has only two (2) safety-related PORV's. These are installed on the pressurizer for overpressurization protection and to prevent lifting of the spring-loaded safety valves. Proper installation was verified by plant personnel. Insulation is not used on air operators at the Robinson Unit.

Item No. 2 referred to Technical Specification requirements for valve inspection. Robinson Technical Specifications do not have requirements for inspection of the PORV's. No credit is taken for PORV action in the safety analysis. Only spring-loaded safety valves are assumed to operate. Approved maintenance instructions, (MI-10, Procedure 1) delineate how these valves will be disassembled and repaired. This procedure also covers the replacement of the valve operator diaphragm. We believe that this procedure is sufficient for compliance to Item No. 2 of the Bulletin.

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Item No. 3 requested assurance that the vendor's recommended service life would not be exceeded. A review of the vendor's service manual revealed no time interval for service life. Instead, it recommended a yearly inspection of the diaphragms to ensure their integrity. This recommendation will be considered for inclusion in the new preventative maintenance program that is presently being established at the Robinson Plant.

The valves investigated were Copes-Vulcan Type D-100-160-2 1/2 diaphragm operator assemblies. The 2-inch valves are used in parallel as power-operated relief valves for the pressurizer. Material used for diaphragm fabrication in Buna "N" rubber, (Manufacturer's Part No. 80815).

In view of the above findings at H. B. Robinson Unit No. 2, no further actions are required for completion of replies to IE Bulletin No. 76-06.

Yours very truly,

E. E. Utley
Vice President
Bulk Power Supply

CSB:bb

cc: Mr. E. Volgenau

UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
230 PEACHTREE STREET, N.W. SUITE 818
ATLANTA, GEORGIA 30303

JUL 21 1976

In Reply Refer To:
IE:II:NCM

50-324
50-261

Carolina Power and Light Company
ATTN: Mr. J. A. Jones
Executive Vice President
Engineering, Construction and
Operation
336 Fayetteville Street
Raleigh, North Carolina 27602

Gentlemen:

Enclosed is IE Bulletin No. 76-06 which requires action by you with regard to your power reactor facility(ies) with an operating license.

Should you have questions regarding this Bulletin or the actions required of you, please contact this office.

Sincerely,

Norman C. Moseley
Director

Enclosures:
IE Bulletin No. 76-06 -
Diaphragm Failure In Air
Operated Auxiliary Actuators
For Safety Relief Valves

NUCLEAR REGULATORY COMMISSION
OFFICE OF INSPECTION AND ENFORCEMENT
WASHINGTON, D. C. 20555

IE Bulletin No. 76-06
DATE: July 21, 1976


DIAPHRAGM FAILURES IN AIR OPERATED AUXILIARY ACTUATORS FOR SAFETY/RELIEF VALVES.

DESCRIPTION OF CIRCUMSTANCES:

On July 8, 1976, Vermont Yankee reported that during a scheduled refueling outage surveillance test on their Target Rock valves, the auxiliary air actuator was found to be inoperable on three of the four valves.

The licensee reported that investigation disclosed that the actuator diaphragms, composed of dacron fabric reinforced silicone rubber, had been degraded by excessive heat. The excessive heat is attributed to the fact that, contrary to the valve manufacturer's installation instructions, thermal insulation had been applied to the pneumatic actuator. The licensee further reported that the valve in which the diaphragm was found not to be degraded, was installed in the direct path of cooling air discharge from the ventilation system, thus receiving supplementary cooling.

Elastomeric materials such as the subject diaphragms are known to have finite service life and to be degraded by excessive temperatures; however, this is the first reported instance of degradation of this component. This event has particular safety significance, since failure of the diaphragms defeats the function of the Automatic Depressurization System. In recognition of this situation, the NRR Division of Operating Reactors conducted a telephone survey on July 16, 1976, of selected BWR operating facilities.

ACTION TO BE TAKEN BY LICENSEE:

All operators of BWR and PWR reactor facilities with operating licenses are to take the following action:

1. Determine that the insulation installed on safety related diaphragm operated relief valves in high temperature fluid systems is in accordance with the current recommendations of the valve vendor, i.e. that there is no thermal insulation on the air actuator.

2. Ensure that the procedures used for the disassembly and inspection of these valves, as required by the Technical Specifications, specifically include inspection of the subject diaphragms to determine that no significant deterioration of the diaphragm material has occurred.

3. Ensure that the vendor's recommended service life and shelf life for the diaphragms is not exceeded for the environmental conditions to which the material is exposed.

4. A report of your plans and schedules for accomplishing the above actions should be submitted within 10 days after receipt of this Bulletin. For facilities already surveyed by NRR: DOR, this report should confirm information reported orally.

5. The NRC Regional Office should be promptly informed, within 24 hours, of any adverse findings resulting from your inspection and/or review of the subject diaphragms or their application.

6. Within 20 days after completion of the actions described in Item 4 above, report the results, including for any valves found to have degradation of diaphragms, the make, type, size, diaphragm material, and service (system) application.

Reports should be submitted to the Director of the NRC Regional Office and a copy should be forwarded to the NRC Office of Inspection and Enforcement, Division of Reactor Inspection Programs, Washington, D. C. 20555.

Approval of NRC requirements for reports concerning possible generic problems has been obtained under 44 U.S.C 3152 from the U. S. General Accounting Office.