



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

April 16, 1980

Docket Nos.: 50-369
and 50-370

Mr. William O. Parker, Jr.
Vice President, Steam Production
Duke Power Company
P. O. Box 2178
422 South Church Street
Charlotte, North Carolina 28242

Dear Mr. Parker:

SUBJECT: PERSONNEL AIRLOCK DOOR SEAL DESIGN
(MCGUIRE NUCLEAR STATION, UNITS 1 & 2)

It has come to our attention that certain plants under construction plan to use personnel airlocks with inflatable door seals. Inflatable door seals, unlike passive compressible door seals, involve the use of active components. These active components must meet certain safety design criteria, e.g., single active failure criteria and redundancy requirements. We understand that the McGuire plant uses such inflatable door seals; therefore, we request that you provide the following information:

1. Provide detailed drawings of the personnel airlock door seals and P&I diagrams of the compressed air systems that will maintain the pressure in the inflated seals during normal operating and accident conditions. Include diagrams of the control and indication systems involved with these seal systems.
2. Describe the operation of the seal systems during normal operating and accident conditions. Give the design requirements for the systems, including seismic and environmental qualification, quality assurance requirements, and safety-grade classification.
3. Describe the provisions for protection against single active failures in the seal systems. Discuss the consequences of loss of power, i.e., loss of offsite power, loss of all AC power, or loss of DC power. Note whether system failures are indicated and alarmed in the main control room. Discuss backup seal pressurization systems, such as compressed air or nitrogen tanks, and whether such backup systems have the capacity

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to assure door seal integrity for extended periods during and following an accident, assuming certain failures, e.g., loss of power.

It is requested that you provide this information no later than May 15, 1980.

Sincerely,

A handwritten signature in cursive script, appearing to read "Robert L. Baer".

Robert L. Baer, Chief
Light Water Reactors Branch No. 2
Division of Project Management

Enclosure:

Ltr R. P. Denise to S. A. Varga
dated 4/11/80

cc: See next page