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LUKE POWER COMPANY

POWER BUILDING

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

81-042-132

MAY 11 1981

WILLIAM O. PARKER, JR.
VICE PRESIDENT
STEAM PRODUCTION

May 5, 1981

TELEPHONE: AREA 704
373-4083

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 Revision 1 to Reportable Occurrence Report RO-369/81-36. This report concerns loss of containment integrity due to multiple personnel air lock seal failures. 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. *By [Signature]*

RWO:pw
Attachment

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

Mr. Bill Lavalley
Nuclear Safety Analysis Center
P. O. Box 10412
Palo Alto, CA 94303

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McGUIRE NUCLEAR STATION

INCIDENT REPORT

Report Number: 81-36

Report Date: April 27, 1981

Occurrence Date: April 14, 1981

Facility: McGuire Unit 1

Identification of Occurrence: Seals on the upper and lower personnel air locks failed.

Conditions Prior to Occurrence: Mode 3

Description of Occurrence: On April 14, 1981 failure of one seal of the lower personnel air lock and one seal of the upper personnel air lock occurred. Both of these seals failed while the door was closed.

Apparent Cause of Occurrence: The seals were designed and manufactured for an operating pressure of 55 to 60 psi. The operating pressure being used was approximately 90 psi. In addition, the seals were not designed to be inflated while unconstrained. This puts too much stress on the inner fabric eventually causing it to tear. The doors were not properly aligned, so that even if the door was closed when the seal was inflated, the seal was effectively unconstrained. This combination of circumstances led to repeated failures of the seals.

Analysis of Occurrence: The lower personnel air lock auxiliary building door was partly open when a seal on the reactor building door failed. The auxiliary building door stopped, as designed. The interlock was overridden to close and secure the door. Maintenance personnel were sent through the upper air lock to work on the lower air lock. While they were inside containment, a seal on the upper air lock auxiliary building door failed. The NRC was informed that containment integrity would have to be violated to allow maintenance personnel to exit containment. This constituted a reportable occurrence pursuant to Technical Specification 3.6.1.1.

Corrective Action: The lower personnel air lock seal was replaced and immediate corrective action was taken to decrease the probability of further seal failures. Seal inflation pressure was reduced from 90 psi to 60 psi. A limited access program was instituted so that personnel could only enter or exit the containment once an hour.

Discussions with the manufacturer resulted in the following long term solution. Seal inflation pressure will be maintained at 60 psi. The doors will be re-aligned and shim plates will be added to eliminate any large sealing gaps. New seals, designed for an operating pressure of 90 psi, will be installed as soon as possible. Delivery is expected within two weeks.

Safety Analysis: The only safety impact occurred when the containment integrity was violated. However, since only new fuel is in the core, the health and safety of the public were not affected.