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UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
611 RYAN PLAZA DRIVE, SUITE 1000
ARLINGTON, TEXAS 76012

September 13, 1979

In Reply Refer To:
RIV
Docket Nos. 50-498/IE Circular No. 79-19
50-499/IE Circular No. 79-19

Houston Lighting & Power Company
ATTN: Mr. E. A. Turner, Vice President
Power Plant Construction and
Technical Services
Post Office Box 1700
Houston, Texas 77001

Gentlemen:

The enclosed IE Circular No. 79-19, is forwarded to you for information. No written response is required. Should you have any questions related to your understanding of this matter, please contact this office.

Sincerely,

Karl V. Seyfrit
Director

Enclosures:
1. IE Circular No. 79-19
2. List of IE Circulars Issued in the Last 6 Months

1072 132

7910080 310

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

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IE Circular No. 79-19
Date: September 13, 1979

LOOSE LOCKING DEVICES ON INGERSOLL-RAND PUMP IMPELLERS

Description of Circumstances:

Three reports have been submitted to the NRC regarding the loosening of locking devices on the impellers of pumps manufactured by the Ingersoll-Rand Company.

The first report was submitted as a significant deficiency (10 CFR 50.55(e)) by Arkansas Power and Light Company in letters of March 17, 1978, and May 9, 1978. The licensee reported excessive noise and vibrations in both Low Pressure Safety Injection (LPSI) pumps during the preoperational test program on Unit 2 of Arkansas Nuclear One (ANO). It was discovered that the washers, jam nut and cap nut used to retain the impellers were missing on both pumps (Ingersoll-Rand Type 8X20WD). The licensee's corrective action involved the installation of a tab washer. This corrective action was, also, taken on the containment spray pumps (Ingersoll-Rand Type 6X23WD) because of similarity of design.

The second report was submitted by Duke Power Company in a licensee event report (LER 50-287/78-23) dated January 24, 1979. The symptoms were similar to those observed at ANO Unit 2 in that high vibration was detected in a reactor building spray pump (Ingersoll-Rand Type 4X11A) for Oconee Unit No. 3. The licensee found that the impeller had worked loose. The corrective action included a revision to the maintenance procedure to specify torque requirements.

The third report was 10 CFR 21 Report No. 79-01 submitted by Portland General Electric Co. on April 16, 1979. This report identified a deficiency that may exist in the Trojan Nuclear Plant containment spray pumps (Ingersoll-Rand Type 6X23WD) in that there is a potential for the impeller lock nut to loosen. The potential deficiency was identified because of the similarity of the containment spray pumps design to the residual heat removal (RHR) pumps (Ingersoll-Rand Type 8X20WD) and the discovery of a loose lock nut on an RHR pump during pump maintenance. The corrective action was to provide a positive mechanical lock on the impeller nut.

Westinghouse Nuclear Service Division has issued a Technical Bulletin to Westinghouse plant owners on loose lock nuts on Ingersoll-Rand Types W, WD, and WDF pumps. Excerpts from that Technical Bulletin are in Enclosure No. 1. Gilbert Engineering, Inc. has, also, informed [illegible] same problem in a letter dated March [illegible] Enclosure No. 2.