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UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
611 RYAN PLAZA DRIVE, SUITE 1000
ARLINGTON, TEXAS 76011

March 16, 1979

In Reply Refer To:
RIV
Docket Nos. 50-445/IE Circular No. 79-04
50-446/IE Circular No. 79-04

Texas Utilities Generating Company
ATTN: Mr. R. J. Gary, Executive Vice
President and General Manager
2001 Bryan Tower
Dallas, Texas 75201

Gentlemen:

The enclosed IE Circular 79-04 is forwarded to you for information. If there are any questions related to your understanding of the suggested actions, please contact this office.

Sincerely,

Karl V. Seyfrit
Director

Enclosures:
1. IE Circular No. 79-04
2. List of IE Circulars
Issued in Last
12 Months

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

IE Circular No. 79-04
Date: March 16, 1979


LOOSE LOCKING NUT ON LIMITORQUE VALVE OPERATORS

Description of Circumstances:

On December 8, 1978, Fort Calhoun Station Unit No. 1 reported that 30 out of 65 Limitorque Type SMB valve operators did not have the locking nut fastened securely in accordance with the manufacturer's recommendation. If this locking nut is not secure, it can loosen and allow the stem nut to move axially to the point that the splines are disengaged; resulting in a loss of drive to the valve stem. The licensee reported that several locking nuts were slightly loose but in no instance had the stem nut backed out enough to affect the operation of the valve. This licensee was made aware of the potential problem by a letter of July 28, 1978, from the NSSS supplier, Combustion Engineering, Inc.

Other plants have reported similar findings. On April 27, 1977, Davis-Besse Nuclear Power Station Unit No. 1, reported that two valve operability failures had been caused by locking nuts loosening and falling off. During the ensuing inspection program, a total of 65 out of 144 safety-related valve operators required staking. Arkansas Nuclear One (ANO), Unit 2, reported on June 29, 1978, that several valve operators required staking. A subsequent inspection at ANO Unit 2 was made by an IE inspector who identified records that 15 out of 17 SMB operators provided by the NSSS supplier (Combustion Engineering Inc.) required staking. Valve operability failures, resulting from loosened locking nuts, have also been reported by Cooper Nuclear Station (Unusual Event Report 75-5), Browns Ferry Unit 2 report of March 6, 1974, and Three Mile Island Nuclear Station Unit 1 reports of March 13, 1976, and October 20, 1976. The corrective action by the licensee in each case was to stake the locking nut.

In June 1978, the Limitorque Corporation issued a supplement to the October 1977, issue of the Type SMB Instruction and Maintenance Manual SMBI-170 that called for the crimping or staking of the locking nuts. The 1971 issue of the manual had statements for crimping and staking of the lock nuts incorporated into the manual. The stem nut specification drawing provided by Limitorque for Unit Types SMB-000, SMB-00, SMB-0, SMB-1, SMB-2, SMB-3, and SMB-4 directs the customer to a Limitorque