



## LONG ISLAND LIGHTING COMPANY

SHOREHAM NUCLEAR POWER STATION

P.O. BOX 618, NORTH COUNTRY ROAD • WADING RIVER, N.Y. 11792

Direct Dial Number

July 18, 1983

SNRC-926

Dr. Thomas E. Murley  
Regional Administrator  
Office of Inspection & Enforcement - Region I  
U.S. Nuclear Regulatory Commission  
631 Park Avenue  
King of Prussia, PA 19406

Limitorque Operator Motor-to-Shaft Key  
Deficiency - (I.E. Notice 81-08)  
Shoreham Nuclear Power Station - Unit 1  
Docket No. 50-322

Dear Sir:

On June 17, 1983 we reported verbally in accordance with 10CFR50.55(e) to Region I a deficiency concerning keys between the motor pinion gear and motor shaft of two motor operated valves located in the Residual Heat Removal System. Recent inspection of the keys confirmed the existence of high shear loading. Both motor operated valves were supplied with Limitorque SB-4-200 valve actuators. This letter serves as our 30 day report on this deficiency.

### Description of Deficiency

As a result of I.E. Information Notice 81-08 "Repetitive Failures of Limitorque Operator SMB-4 Motor to Shaft Key" and Limitorque Corporation letter to LILCO dated June 3, 1981 in reference to I.E. Notice 81-08, existing keys between the motor pinion gear and motor shaft were replaced with type 4140 keys in all potentially affected actuators. This was done in lieu of hardness testing of existing keys. E&DCR's P-3647A, B and C cover this rework for Safety Related valves at Shoreham.

Work per E&DCR's P-3647A, B and C to replace the keys is complete and recent inspection information provided during this rework has confirmed the existence of high shear loading in two instances:

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Valve 1E11\*MOV-037A - Key sheared in half

Valve 1E11\*MOV-037B - Evidence of high shear loading

A system review concerning consequence imposed by failure of these keys indicates that failure of the keys could adversely impact operation of the LPCI mode of Residual Heat Removal. Accordingly, it has been determined that this constituted a reportable deficiency.

Corrective Action

As described above, corrective action has been completed with regard to I.E. Notice 81-08 for Shoreham.

Very truly yours,

*W. Museler for J.L. Smith*

J. L. Smith  
Manager, Special Projects  
Shoreham Nuclear Power Station

GML:bc

cc: J. Higgins  
All Parties Listed in Attachment 1

ATTACHMENT 1

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