

July 30, 1984

SBN- 702
T.F. Q2.2.2

United States Nuclear Regulatory Commission
Region I
631 Park Avenue
King of Prussia, PA 19406

Attention: Mr. Richard W. Starostecki, Director
Division of Project and Resident Programs

References: (a) Construction Permits CPPR-135 and CPPR-136, Docket
Nos. 50-443 and 50-444
(b) PSNH Letter, dated May 25, 1984, "Interim 10CFR50.55(e)
Report: Limitorque Motor Operators", J. DeVincentis to
R. W. Starostecki

Subject: Interim 10CFR50.55(e) Report: Limitorque Motor Operators

Dear Sir:

In Reference (b), we filed an interim 10CFR50.55(e) report regarding four potential deficiencies with Limitorque motor operators. We have determined that items 1 and 4 are reportable per 10CFR50.55(e), and that items 2 and 3 require further evaluation to determine their reportability.

Description of Deficiencies

A description of the several Limitorque operator deficiencies is as follows:

Item 1 Loose Contact Screws on Contact Bridge of Torque Switch

The improper operation of some motor operators was traced to loose contact screws on the contact bridge of the torque switch. These loose screws are apparently a result of either inadequately tightened screws or the relaxation of fiber shims under the contact bridge, which causes the screws to loosen. This problem appears to be limited to the torque switch type used in SMB-000 operators.

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Item 2 Incorrect Spring Pack

The improper operation of sixteen operators was determined to be a result of incorrectly supplied spring packs. These operators (all sequential serial numbers) were supplied under the same purchase order.

Item 3 Incorrect Limiter Plate on Torque Switch

A number of operators were observed to have torque switch limiter plates which could allow torque switch settings greater than stated on the torque switch calibration sticker.

Item 4 Improper Lug Connections

A number of operators were found to have various deficiencies concerning terminal lug connections. These include poor crimps, exposed wirestrands, and damaged wire insulation.

Safety Implications

Item 1 Loose contact screws, if left uncorrected, can lead to a loss of electrical continuity in the control circuit and subsequent to valve operator failure. This could prevent a safety-related valve from performing its safety function.

Items 2 & 3 We are continuing to investigate the cause and safety implications of these deficiencies.

Item 4 Poor crimps, exposed wirestrands, and damaged wire insulation, if left uncorrected, can lead to valve operator failure. This could prevent a safety-related valve from performing its safety function.

Corrective Action

Item 1 Limitorque has informed us that they have received only one other report of loose contact screws during the 15 years that this torque switch design has been in use. To eliminate any possibility that the fiber shims used under the contact bridge are responsible for the loosening of the contact screws, Limitorque has implemented a design improvement by replacing the fiber shims with metal shims on current production. In accordance with Limitorque's latest procedures, we have included the replacement of the fiber shims with metal shims, and the tightening of the contact screws into our test procedures to eliminate the possibility of any future problems.

Items 2 & 3 Corrective action, if any, to be determined after contact with vendors.

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Item 4

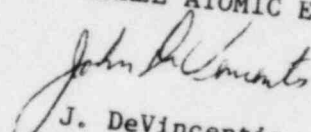
During our relubrication/verification effort and startup testing, lug connections, crimps, and wiring are inspected and replaced or repaired to insure acceptable quality.

The vendor response received pertaining to Items 2 and 3 was insufficient to determine reportability or corrective action. We are proceeding to obtain additional information from the vendor. We will submit an additional response to Region I by October 31, 1984.

This letter is being filed pursuant to the interim reporting provisions of 10CFR50.55(e)(3).

Very truly yours,

YANKEE ATOMIC ELECTRIC COMPANY


J. DeVincentis
Engineering Manager

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