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July 15, 1985

Docket No. 50-352 02

License No. NPF-27

Dr. Thomas E. Murley, Administrator
Region I
U.S. Nuclear Regulatory Commission
631 Park Avenue
King of Prussia, PA 19406

SUBJECT: Special Reporting Requirement for
Inoperable Seismic Monitoring at
Limerick Generating Station
Follow-Up Report

REFERENCE: Technical Specification 3.3.7.2 and 6.9.2

Dear Dr. Murley:

This revision to a special report of an inoperable seismic monitoring system, submitted June 12, 1985 amplifies the corrective action and cause of event. Revisions are shown with a vertical bar in the margin. Special reports on of this nature are submitted pursuant to the requirements of Technical Specification 3.3.7.2 and 6.9.2 which state:

3.3.7.2 The seismic monitoring instrumentation shown in Table 3.3.7.2-1* shall be OPERABLE.

APPLICABILITY: At all times.

ACTION:

- a. With one or more of the above required seismic monitoring instruments inoperable for more than 30 days, prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within the next 10 days outlining the cause of the malfunction and the plans for restoring the instrument(s) to OPERABLE status.

SPECIAL REPORTS

6.9.2 Special reports shall be submitted to the Regional Administrator of the Regional Office of the NRC within the time period specified for each report.

DESCRIPTION OF EVENT:

On May 1, 1985, with the unit in cold shutdown, the surveillance test for the Triaxial Response Spectrum Analyzer (Model No. 505N1 MRAD Corp.; TRSA) was performed. The TRSA analyzes data and provides acceleration values for a range of frequencies (0-33.5 HZ). The ST for the TRSA revealed that acceptable limits for the specific acceleration input of a negative 0.05g could not be met; however, all other acceleration inputs were within acceptable limits.

CAUSE OF EVENT:

The specific cause of failure was originally undetermined. A manufacturer's representative was contracted to investigate the problem. It was determined that the "scale factor operational amplifier" on the analyzer board was inoperable. This component receives an input signal from the magnetic tape data and generates a proportional signal for the microprocessor to analyze.

A second problem was identified which required that the analyzer be taken off site for repairs. A voltage to frequency converter in the internal clock was also defective. The internal clock is used in storing data.

CONSEQUENCES OF EVENT:

Triaxial accelerometers are used to collect seismic data and alert the operators to the occurrence of a possible seismic event. The TRSA is used to analyze the data which is collected at various locations throughout the plant. With the TRSA inoperable the data can be sent off-site for analysis. The remainder of the seismic monitoring system, including annunciators and accelerometers were operable; therefore, the consequences of this event were minimal.

CORRECTIVE ACTION:


A field representative from the manufacture of the TRSA arrived on-site on June 12, 1985 to address this problem and effect repairs.

The manufacturer's representative repaired the "scale factor operational amplifier" on site and the TRSA was functionally tested (ST. 2.036.601-0). The test results were not satisfactory and the analyzer was taken off site for repairs to the voltage to frequency converter in the internal clock.

On June 26, 1985, the functional test was satisfactory completed and the TRSA was declared operable.

Should you require additional information, please do not hesitate to contract us.

Very truly yours,



W. T. Ullrich
Superintendent
Nuclear Generation Division

cc: E. M. Kelly, LGS Senior Site Inspector
See Attached Service List

cc: Judge Helen F. Hoyt
Judge Jerry Harbour
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Atomic Safety & Licensing Appeal Board
Atomic Safety & Licensing Board Panel
Docket & Service Section (3 Copies)
E. M. Kelly
Timothy R. S. Campbell

July 3, 1985