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VICE-PRESIDENT
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AUG 24 1984

Dr. Thomas E. Murley, Director
Office of Inspection and Enforcement, Region I
United States Nuclear Regulatory Commission
631 Park Avenue
King of Prussia, PA 19408

Subject: Limerick Generating Station, Unit 1
Final Significant Deficiency Report No. 144
Restricted Swing on Snubbers

Reference: Telecon: P.K. Pavlides/PECO to Jane Grant/NRC
Dated 07/26/84
File: QUAL 2-10-2 (SDR #144)

Dear Dr. Murley:

In compliance with 10CFR50.55e, enclosed is the final report on the subject deficiency. Your office was informed of this matter on July 26, 1984.

Sincerely,

John S. Kemper

WSS/082184/05
Attachment
Copy to: Director of Inspection and Enforcement
United States Nuclear Regulatory Commission
Washington, DC 20555

S. Chaudhary, Resident NRC Inspector (Limerick)

IE 27

Limerick Generating Station, Units 1 & 2
Significant Deficiency Report No. 144
Improper Clearance Between Rear Brackets
and PSA-35 Mechanical Snubber Bodies

I. Introduction

This is a final report concerning improper clearances between rear brackets and 37 PSA-35 Mechanical Snubber Bodies at Limerick Generating Station. PECO has determined this item to be reportable under 10CFR50.55(e). Twenty-five snubbers are located on Q-iisted portions of the Main Steam, High Pressure Coolant Injection, Residual Heat Removal and Emergency Service Water Systems and twelve snubbers are on non-Q listed portions of the Main Steam System outside containment. These snubbers were supplied by Bergen-Paterson Corp. and installed by Bechtel Power Corp., the Architect/Engineer for the Limerick Project.

II. Description of Deficiency

On May 17, 1984 it was reported that four snubbers on the Main Steam System had gaps between their rear bracket ends and the snubber bodies which would restrict snubber swing angle to less than 12°. This lack of proper clearances identifies problems associated with design and manufacture from the vendor which allowed components to be built and installed that did not meet the original specifications for Pipe Hangers Supports, and Restraints (Spec. 8031-P-317, Section 8.2.10).

Bergen-Paterson Corp. has determined that the interference between the rear bracket and the snubber body was caused by brackets supplied with a 3 inch radius instead of the required 2 3/8 inch radius. These units were delivered prior to October, 1979.

III. Corrective Action

Bechtel Project Engineering has reviewed the pipe support design, installation, and expected movement/rotation for each of the supports. This review has shown that 33 installations are acceptable "as is" (based on expected swing angle from the installed position and the available clearance to swing) and 4 require repair. Repair will consist of field trimming 1/4 inch min., 1/2 inch max. from the end of the rear bracket to provide the proper clearances. Additionally, all PSA-35 snubbers will be reviewed as part of our pre-service examination of snubbers (generic Technical Test TT1.30) to insure that the gap in question is greater than 1/4 inch. The installation specification for critical pipe supports, hangers and restraints (Spec. 8031-P-319) has been revised such that all future installations of PSA-35 snubbers will have the proper clearances between the rear bracket and snubber body.

IV. Safety Implications

Failure of a snubber could result when the snubber is subjected to sufficient bending forces due to pipe movement with improper rear bracket to snubber clearances. All snubbers are required to be functional to ensure that the structural integrity of the reactor coolant system and all other safety related systems is maintained during and following a seismic or other initiating dynamic event for which the systems were designed. Additionally, failure to provide proper swing angle may overstress the attached system by reducing system flexibility and restricting pipe movement during normal heatup or cooldown. Because we have identified the problem with vendor input, evaluated each deficiency and instituted a program for inspection of all PSA-35 snubbers with the appropriate corrective action for improper clearances, there are no further safety implications. Also, by revising the installation specification, corrective action has been taken to prevent recurrence of this condition.

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