



THE CLEVELAND ELECTRIC ILLUMINATING COMPANY

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February 23, 1984

MURRAY R. EDELMAN

VICE PRESIDENT
NUCLEAR

Mr. James G. Keppler
Regional Administrator, Region III
Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
799 Roosevelt Road
Glen Ellyn, Illinois 60137

RE: Perry Nuclear Power Plant
Docket Nos. 50-440; 50-441
Defective Capstan Spring in
Mechanical Snubbers Manufactured
by Pacific Scientific Company
[RDC 85(83)]

Dear Mr. Keppler:

This letter serves as the final report pursuant to 10CFR50.55(e) concerning silver plated stainless steel capstan springs used in model PSA 1 and PSA 3 mechanical snubbers manufactured by Pacific Scientific Company. Mr. P. R. Pelke of your office was first notified on October 20, 1983, by Mr. E. Riley of The Cleveland Electric Illuminating Company that this problem was being evaluated. Previously we submitted an interim report on November 17, 1983.

This report contains a Description of the Deficiency, an Analysis of Safety Implication and the Corrective Action Taken.

Description of the Deficiency

The Cleveland Electric Illuminating Company (CEI) received information from Pullman Power Products (PPP), our supplier of snubbers under our procurement specification SP527, that defective capstan springs were found in certain PSA-1 and PSA-3 mechanical snubbers.

We were informed that during testing of the PSA-1 snubbers at Union Electric's Callaway station, several capstan springs had failed due to cracking in the "tang area". Correspondence received from PPP stated that initial metallurgical tests indicated spring cracking occurred because of stresses induced during spring forming which caused hydrogen cracking during subsequent silver plating.

Analysis of Safety Implication

The snubbers described herein serve to restrain affected piping during seismic events to prevent overstress, while at the same time permitting piping movement due to thermal expansion. Postulated failure of the capstan spring could result in failure of the snubber to restrain a portion of a piping system during a seismic event. As a result, subject piping could be overstressed in excess of design allowables. Please note that there is no evidence to date that any PNPP snubber contains a failed capstan spring.

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Corrective Action

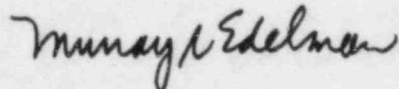
Pacific Scientific Company (PSC), the snubber manufacturer, has indicated that all affected snubbers should be inspected and the capstan springs replaced. In order to eliminate any uncertainty as to the integrity of these components, CEI directed PPP to repair or replace all affected snubbers.

Pullman Power Products and its subvendor, Power Piping Company (PPC), have identified a total of 289 PSA-1 and PSA-3 snubbers within the scope of this recall. All affected snubbers will be returned to PSC for inspection and repair. All repaired snubbers will also be subjected to operability tests prior to return.

We anticipate the above described corrective action will be completed by June 30, 1984.

Please call if there are any additional questions.

Sincerely,



Murray R. Edelman
Vice President
Nuclear Group

MRE:pab

cc: Mr. M. L. Gildner
NRC Site Office

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