Nebraska Public Power District

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August 3, 1981

Mr. Karl V. Seyfrit, Director
U.S. Nuclear Regulatory Commission
Office of Inspection & Enforcement
Region IV
611 Ryan Plaza Drive
Suite 1000
Arlington, Texas 76011

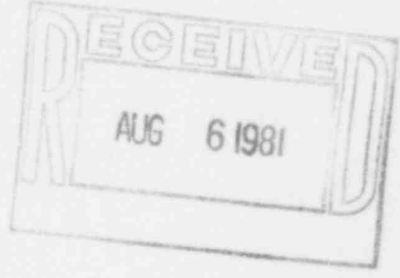
Subject: IE Bulletin No. 81-01
"Surveillance of Mechanical Snubbers"

Reference: 1) Letter J. M. Pilant to K. V. Seyfrit
Dated March 6, 1981, Same Subject

2) Letter J. M. Pilant to K. V. Seyfrit
Dated April 2, 1981, Same Subject

3) Letter L. C. Lessor to K. V. Seyfrit
Dated June 1, 1981, LER No. 81-009

4) IE Circular No. 81-05
"Self-aligning Rod End Bushings for
Pipe Supports"



Dear Mr. Seyfrit:

This letter is in response to the subject bulletin and describes the results of the inspection of safety-related mechanical snubbers at Cooper Nuclear Station. Reference 1, as modified by Reference 2, described the District's approach to the inspections conducted during the Spring 1981 refueling outage.

The following is a description of the inspection results.

Visual Inspections

All safety-related mechanical snubbers were visually inspected. The procedure used included inspections for indications of excessive vibrations and impact loads as well as a check of the bushing and spherical bearings per the guidance of Reference 4. No snubbers were found to be inoperable by visual inspection.

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Design Review

A design review of 20% of the safety-related mechanical snubbers was conducted. The review concluded that all snubbers were adequately sized based upon original loading considerations. However, using the latest load definitions resulting from the Mark I program, three mechanical snubbers were found to have an inadequate load bearing capability. As part of the Mark I program SRV Discharge Line requalification effort, these supports had previously been identified for replacement.

Mechanical Inspections

Two Pacific Scientific mechanical snubbers were found inoperable during the mechanical inspection (stroking). This information was previously provided to you in Reference 3. A total of 40% of the safety-related mechanical snubbers were, therefore, inspected [10x(n+2)], including all of those on the lines which could possibly be affected by the two failed units. No additional inoperable snubbers were found.

An onsite inspection and disassembly by a vendor representative indicated that the probable cause of both failures was a single high load cycle which resulted in a cracked thrust bearing in both inoperable units. Inasmuch as there has not been a seismic event at Cooper Nuclear Station, the District is preceding with an additional analysis by a metalurgical test facility to better determine the cause for the thrust bearing failures. A follow-up mechanical inspection will be conducted during the Fall 1981 outage of the snubbers used to replace those previously found inoperable. No further inspections are currently planned other than those required by Technical Specifications, pending the results of the metalurgical test of the failed thrust bearings.

Slightly more than 5 man-rem of exposure resulted from this inspection program.

Should you have any questions concerning this matter, please contact my office.

Sincerely,

Jay M. Pilant

Jay M. Pilant
Director of Licensing
and Quality Assurance

JMP:KCW:cmk