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SUBJECT: Responds to request for addl info re emergency Tech Spec
change request ltr dtd 890901.

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AEP:NRC:1094A

Donald C. Cook Nuclear Plant Unit 1
Docket No. 50-315
License No. DPR-58
EMERGENCY TECHNICAL SPECIFICATION CHANGES;
SNUBBER INOPERABILITY ADDITIONAL INFORMATION

U. S. Nuclear Regulatory Commission
Document Control Desk
Washington, D. C. 20555

Attn: T. E. Murley

September 6, 1989

Dear Dr. Murley:

This letter is in response to your staff's request for additional information concerning our Emergency Technical Specification Change request letter submitted on September 1, 1989, AEP:NRC:1094. The additional information requested concerned two questions, one on our snubber rebuild history and the other on our evaluation for Criterion No. 2 of 10 CFR 50.92. The responses are provided in the attachment to this letter.

This document has been prepared following Corporate procedures that incorporate a reasonable set of controls to ensure its accuracy and completeness prior to signature by the undersigned.

Sincerely,

M. P. Alexich
Vice President

MPA/eh

Attachment

cc: D. H. Williams, Jr.
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ATTACHMENT TO AEP:NRC:1094A

EMERGENCY TECHNICAL SPECIFICATION CHANGES;
SNUBBER INOPERABILITY ADDITIONAL INFORMATION

AEP:NRC:1094
Supplemental Information

The following information is provided to supplement our September 1, 1989 letter AEP:NRC:1094 as requested by Joe Gitter.

How many Grinnell snubber lock up velocity test failures have occurred at Cook Plant? Subsequent to these failures how many were rebuilt? How many if any failed their subsequent lock up velocity retest? Provide information on replacement parts used for snubber rebuild?

Twenty-one 2 1/2" X 5" Grinnell snubbers were tested in 1978. Of the twenty-one tested eighteen failed their as-found test and were rebuilt or adjusted. The majority of the failures were due to high lock up velocities and of the eighteen rebuilt or adjusted none has failed its subsequent retest in lockup or bleed rate. All were retested between 1981-1987. 1-GRC-S519 which passed its 1978 functional test was not rebuilt until 1987 when it failed due to a compression lockup velocity of 16.3 IPM in lieu of the specified 15.1 in/min. All replacement parts are purchased as N-Grade with 10 CFR Part 21 reportability as applicable. Shelf life for seal materials is monitored to ensure that out of date materials are not installed. Reference to part numbers in the maintenance procedures ensures that the correct parts are used.

Provide Additional Clarification on the Evaluation for Criterion No. 2 of 10 CFR 50.92?

The change involves no physical modifications to the plant nor any changes in plant operations. The only change is the assumed condition that the maximum lock-up velocity of the snubber is at 16.3 inches/minute instead of 15.1 in/min as specified in the snubber testing program. Grinnell Corporation, manufacturer of the snubber has evaluated the increase in the specified lock-up velocity of about 1.2 in/min and has stated that there were no significant differences in the dynamic responses with tested lock-up velocities and that the snubber would have locked up as expected.

The piping system containing the snubber # 1-GRC-S519 was originally analyzed seismically utilizing PISOL piping program which considers the snubber to be in a locked condition during both OBE and DBE condition. The piping analysis results will not change unless:

- (1) The snubber does not lock up, or
- (2) There is a significant pin to pin displacement of the snubber prior to its lock-up.

The snubber manufacturer, Grinnell Corp. was contacted to verify if the snubber will lock up at the tested lock up velocity of 16.3 in/min. The manufacturer has confirmed that the snubber will be operable and will perform its intended function.

Technical report no. PHD7579-S-1 (A parametric study of the effect of locking velocity and bleed rate setting on the Dynamic performance of ITT Grinnell Fig. 200 and Fig. 201 Hydraulic Snubbers) concluded that the maximum pin to pin displacement of a snubber at any locking velocity is not significantly different from the value at the factory setting. Therefore there will be no significant change in pin to pin displacement of this snubber based on the recorded velocity.

Therefore, the snubber would have behaved as a rigid support and provided the required structural integrity to the pressurizer spray line during a design basis earthquake. This would not have changed the pipe behavior during a DBE event and the slight change in lock-up velocity of the snubber should not create the possibility of a new or different kind of accident from any previously analyzed or evaluated.

Conclusion

A review of Grinnell's Report No. PHD-6500-7 reveals that the worst case locking velocity has a considerable safety factor which would permit the snubber to lock up at velocities greater than 16.3 inches/minute or our self-imposed limit 15.1 inches/minute. Our decision to rebuild the snubber instead of adjusting it in 1987 was based on our snubber maintenance program not on a concern that the snubber would fail to lock-up. The snubber passed the post maintenance test in 1987 and, based on our maintenance history provided above, there is no reason to believe it would not have satisfactorily passed a bench test of the locking limits just as it satisfactorily passed a visual inspection during the recent outage.

We appreciate the temporary waiver of compliance of T/S 3/4.7.8. which precluded shutdown and the imposition of unnecessary thermal cycling of the unit. In light of the additional information provided herein however, we respectfully request consideration of removal of the requirement to functionally test the snubber 1-GRC-S519 not later than December 31, 1989. With this additional information we believe that our failure to comply with T/S 3/4.7.8. during the past outage has only procedural, not safety significance. Further, while procedures are important, we do not believe this oversight is worthy of the unnecessary thermal cycling of the unit. The most reasonable course of action therefore, would be to perform a functional testing of the snubber during the next refueling outage or the next outage requiring entry into mode 5 which ever is sooner.