
Item A-13: Snubber Operability Assurance (Rev. 2)

DESCRIPTION

Historical Background

In May 1978, the ACRS and the staff expressed concern over the substantial number of LERs related to the malfunction of snubbers, the most frequent of which were: (1) seal leakage in hydraulic snubbers; and (2) high rejection rate during functional testing of snubbers. In reviewing these LERs, the staff noted differences in the numbers of snubbers utilized in systems of similar configurations and questioned the methodology used for determining the need for snubbers in any given system. As a result of these concerns and the desire to provide a significant increase in assurance of the health and safety of the public, snubber operability assurance was given a priority Category A designation and included in NUREG-0371.¹

Safety Significance

Snubbers are utilized primarily as seismic and pipe whip restraints at nuclear power plants. Their safety function is to operate as rigid supports for restraining the motion of attached systems or components under rapidly applied load conditions such as earthquakes, pipe breaks, and severe hydraulic transients.

Possible Solutions

The solutions proposed in NUREG-0371² were as follows: (1) evaluation of industry practice associated with snubber qualification testing, design and analysis procedures, selection and specification criteria, and pre-

service and in-service inspection programs; and (2) development of TS, SRP³ revisions, and Regulatory Guides to assure a high level of snubber operability.

CONCLUSION

In 1980, the staff addressed the operation of snubbers with revisions to STS 3/4.7.9; SRP⁴ Section 3.9.3 was

later revised in 1981. A draft regulatory guide (Task SC-708-4)⁵ on the qualification and acceptance tests for snubbers used in systems important to safety was issued by the staff, but was later withdrawn when it was

determined that there were no plans for its use in the licensing process.⁶ Thus, with the SRP revision, this

¹ NUREG-0371, "Task Action Plans for Generic Activities (Category A)," U.S. Nuclear Regulatory Commission, November 1978.

² NUREG-0371, "Task Action Plans for Generic Activities (Category A)," U.S. Nuclear Regulatory Commission, November 1978.

³ NUREG-0800, "Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants," U.S. Nuclear Regulatory Commission, (1st Ed.) November 1975, (2nd Ed.) March 1980, (3rd Ed.) July 1981.

⁴ NUREG-0800, "Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants," U.S. Nuclear Regulatory Commission, (1st Ed.) November 1975, (2nd Ed.) March 1980, (3rd Ed.) July 1981.

⁵ Draft Regulatory Guide and Value/Impact Statement, Task SC 708-4, "Qualification and Acceptance Tests for Snubbers Used in Systems Important to Safety," U.S. Nuclear Regulatory Commission, February 1981. [9503290322]

⁶ Federal Register Notice 54 FR 16030, "Draft Regulatory Guide; Withdrawal," April 20, 1989.

issue was RESOLVED and requirements were issued.

