

3.6 LIMITING CONDITIONS FOR OPERATION

I. Shock Suppressors (Snubbers)

1. Except as noted in 3.6.I.2 and 3.6.I.3 below, all required safety-related snubbers shall be operable whenever its supported system is required to be operable.
2. With one or more required snubbers inoperable, within 72 hours, replace or restore the snubber to operable status and perform an engineering evaluation per Specification 4.6.I.1b and c, on the supported component. In all cases, the required snubbers shall be made operable or replaced prior to reactor startup.
3. If the requirements of 3.6.I.1 and 3.6.I.2 cannot be met, the supported system shall be declared inoperable and the appropriate action statement for that system shall be followed.

4.6 SURVEILLANCE REQUIREMENTS

I. Shock Suppressors (Snubbers)

1. Each snubber shall be demonstrated operable by performance of the following inspection program.

a. Visual Inspections

Visual inspections shall be performed in accordance with the following schedule:

<u>No. Inoperable Snubbers per Inspection Period</u>	<u>Next Required Inspection Intervals</u>
0	18 months <u>+25%</u>
1	12 months <u>+25%</u>
2	6 months <u>+25%</u>
3, 4	124 days <u>+25%</u>
5, 6, 7	62 days <u>+25%</u>
8 or more	31 days <u>+25%</u>

The snubbers may be categorized into two groups: the accessible and those inaccessible during reactor operation. Each group may be inspected independently in accordance with the above schedule. The inspection interval shall not be lengthened more than one step at a time. Inaccessible snubbers are required to be inspected only if the period of time in which they become accessible is greater than 48 hours.

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b. Visual Inspection Acceptance Criteria

Visual inspections shall verify (1) that there are no visible indications of damage or impaired operability, and (2) that the snubber installation exhibits no visual indications of detachment from foundations or supporting structures. Snubbers which appear inoperable as a result of visual inspections may be determined operable for the purpose of establishing the next visual inspection interval, providing that (1) the cause of the rejection is clearly established and remedied for that particular snubber and for other snubbers that may be generically susceptible; and (2) the affected snubber is functionally tested in the as-found condition and determined operable per Specification 4.6.i.c, as applicable. When the fluid port of a hydraulic snubber is found to be uncovered, the snubber shall be determined inoperable unless it can be determined operable via functional testing for the purpose of establishing the next visual inspection interval. The functional test, in this case, shall be started with the piston in the as-found condition, extending the piston rod in the tension mode direction.

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c. Functional Tests

At least once per 18 months during shutdown, a representative sample of 10% of the snubbers in use in the plant shall be functionally tested either in place or in a bench test. For each snubber that does not meet the functional test acceptance criteria of Specification 4.6.I.1.d, an additional 10% of the snubbers shall be functionally tested until no more failures are found or until all snubbers have been functionally tested.

Snubbers of a rated capacity greater than the capability of the testing machine shall be functionally tested as follows: (1) the lock up and bleed velocity of the snubber valve shall be verified by testing it on a cylinder that is within the capability of the testing machine, (2) the free stroke of the cylinder shall be checked, and (3) the pressure retaining capability of the cylinder shall be checked.

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Snubbers identified as especially difficult to remove or in high radiation areas shall also be included in the representative sample.

In addition to the regular sample, snubbers which failed the previous functional test shall be retested during the next test period unless the root cause for the problem has been determined and corrective actions implemented. If a spare snubber has been installed in place of a failed snubber, then both the failed snubber (if it is repaired and installed in another position) and the spare snubber shall be retested during the next test period. Failure of these snubbers shall not entail functional testing of additional snubbers.

If any snubber selected for functional testing either fails to lock up or fails to move, i.e., frozen in place, the cause will be evaluated and if caused by manufacturer or design deficiency, all

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generically susceptible snubbers of the same design subject to the same defect shall be functionally tested. This testing requirement shall be independent of the requirements stated above for snubbers not meeting the functional test acceptance criteria.

For the snubber(s) found inoperable, a documented engineering evaluation shall be performed on the component(s) which are supported by the snubber(s). The scope of the evaluation shall be based on engineering judgement and may be limited to a visual inspection of the supported component(s). The purpose of this engineering evaluation shall be to determine if the component(s) supported by the snubber(s) were adversely affected by the inoperability of the snubber(s) in order to ensure that the supported component remains capable of meeting the designed service.

d. Hydraulic Snubbers Functional Test Acceptance Criteria

The hydraulic snubber functional test shall verify that:

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#### J. Thermal Hydraulic Stability

1. When the reactor mode switch is in RUN, the reactor shall not intentionally be operated in a natural circulation mode, except as permitted in 3.6.J.2 below, nor shall an idle recirculation pump be started with the reactor in a natural circulation mode, except as permitted in 3.6.J.2.
2. For the purpose of performing special tests, operation in the natural circulation mode is permitted. For the purpose of recovering forced circulation operation during and after special tests at natural circulation, startup of an idle recirculation pump is permitted if:
  - a. The  $\Delta T$  between the idle loop and vessel saturation temperature is  $\leq 50^{\circ}\text{F}$ .
  - b. The  $\Delta T$  between the idle loop and an operating loop is  $\leq 50^{\circ}\text{F}$ .
  - c. The  $\Delta T$  between the vessel top head and the vessel bottom head is  $\leq 145^{\circ}\text{F}$ .

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1. Activation (restraining action) is achieved within the specified range of velocity or acceleration in both tension and compression.
2. Snubber bleed, or release rate, where required, is within the specified range in compression or tension. For snubbers specifically required to not displace under continuous load, the ability of the snubber to withstand load without displacement shall be verified.

#### J. Thermal Hydraulic Stability

Operation in the natural circulation mode shall be timed and recorded for special tests. Also, during special tests loop temperatures, vessel saturation temperature (pressure), vessel top head temperature, and vessel bottom head temperature shall be monitored and recorded.

PAGES 116, 116a, 116b, and 116c HAVE BEEN DELETED.