

15.4.13 Shock Suppressors (Snubbers)

Applicability

Applies to the periodic inspection and testing requirements of safety related snubbers.

Objective

To verify the operability of the snubbers.

Specifications

The following surveillance requirements apply to those snubbers listed in Table 5.3.13-1.

1. All snubbers shall be visually inspected to verify operability in accordance with the following schedule:

Number of Snubbers Found Inoperable During Inspection or During Inspection Interval	Next Required Inspection Interval
0	18 months \pm 25%
1	12 months \pm 25%
2	6 months \pm 25%
3, 4	124 days \pm 25%
5, 6, 7	62 days \pm 25%
≥ 8	31 days \pm 25%

The required inspection interval shall not be lengthened more than one step at a time.

2. During each refueling shutdown, two representative snubbers shall be functionally tested for operability. For each snubber found to be inoperable, an additional 10% of that type snubber shall be tested until no more failures are found or all units have been tested.
3. The initial inspection shall be performed within 6 months from the date of issuance of these specifications. For the purpose of entering the schedule in Specification 15.4.13.1, it shall be assumed that the facility had been on a 6 month inspection interval.

4. A record of the service life of each snubber, the date at which the designated service life commences and the installation and maintenance records on which the designated service life is based shall be maintained. Concurrent with the next inservice visual inspection and at least once per 18 months thereafter, the installation and maintenance records for each snubber listed in Table 15.3.13-1 shall be reviewed to verify that the indicated service life has not been exceeded or will not be exceeded prior to the next scheduled snubber service life review. If the indicated service life will be exceeded prior to the next scheduled snubber service life review, the snubber service life shall be reevaluated or the snubber shall be replaced or reconditioned so as to extend its service life beyond the date of the next scheduled service life review. This reevaluation replacement or reconditioning shall be indicated in the records.

15.4.13 Shock Suppressors (Snubbers) (Continued)

Basics

All safety related snubbers are visually inspected for overall integrity and operability. The inspection will include verification of proper orientation, adequate hydraulic fluid level and proper attachment of snubber to piping and structures. To further increase the assurance of snubber reliability, functional tests are performed once each refueling cycle on a representative sample of snubbers. These tests may include stroking of the unit to verify proper piston movement, lock-up and bleed; however, on those units where such tests cannot be performed at the plant other types of functional tests may be performed using recommendations of the manufacturer whenever possible. Observed failures on these samples shall require testing of additional units. Snubbers rated at 50,000 lbs. or greater need not be functionally tested at their full rated capacity.

The inspection frequency is based upon maintaining a constant level of snubber protection. Thus, the required inspection interval varies inversely with the observed snubber failures. The number of inoperable snubbers found during a required inspection determines the time interval for the next required inspection. However, the results of such early inspections performed before the original required time interval has elapsed (nominal time less 15%) may not be used to lengthen the required inspection interval. Any inspection whose results require a shorter inspection interval will override the previous schedule.

The snubbers selected for the testing and inspection mentioned in Specification 15.4.13.2 above are chosen on a rotating basis such that over a period of eleven refueling cycles all accessible snubbers will have been tested.

- M. Test results, in units of microcuries, for leak test performed pursuant to Specification 15.4.12.
- N. Record of annual physical inventory verifying accountability of sources subject to Specification 15.4.12.
- O. *Records of training and qualification for current plant NRC licensed staff and key personnel.
- P. *Records of in-service inspections performed pursuant to these technical specifications.
- Q. *Records of Quality Assurance activities required by the QA Manual.
- R. *Records of reviews performed pursuant to 10 CFR 50.59.
- S. *Records of meetings of the Manager's Supervisory Staff and the Off-Site Review Committee.
- T. *Records of Environmental Qualification which are covered under the provisions of paragraph 15.6.12.
- U. *Records of the service life of all snubbers in accordance with Specification 15.4.13.4.

*Starred items will be permanently retained.

15.3.15 Overpressure Mitigating System Operations

Applicability

Applies to operability of the overpressure mitigating system when the reactor coolant system temperature is less than the minimum temperature for the inservice pressure test and the reactor coolant system is water solid.

Objective

To specify functional requirements and limiting conditions for operation on the use of the pressurizer power operated relief valves when used as part of the overpressure mitigating system and to specify further limiting conditions for operation when the reactor coolant system is operated without a pressure absorbing volume in the pressurizer.

Specification

A. System Operability

1. Except as specified in 15.3.15.A.2 below, the overpressurization mitigating system shall be operable whenever the reactor coolant system is not open to the atmosphere or a pressure absorbing volume is not present in the pressurizer and the temperature is less than the minimum pressurization temperature for the inservice pressure test, as specified in Figures 15.3.1-1 (Unit 1) and 15.3.1-3 (Unit 2).
Operability requirements are:
 - a. Both pressurizer power operated relief valves operable at a setpoint of ≤ 425 psig.
 - b. The upstream isolation valves to both power operated relief valves are open.
2. The requirements of 15.3.15.A.1 may be modified to allow one of the two power operated relief valves to be inoperable for a period of not more than seven days.

of water relief utilizes the pressurizer power operated relief valves (PORV's). The PORV's are made operational for low pressure relief by utilizing a dual setpoint where the low pressure circuit is energized and de-energized by the operator with a keylock switch depending on plant conditions. The logic required for the low pressure setpoint is in addition to the existing PORV actuation logical and will not interfere with existing automatic or manual actuation of the PORV's.

During plant cooldown prior to reducing reactor coolant system temperature below the minimum temperature allowable for the inservice pressure test or if below this temperature with a pressure absorbing volume in the pressurizer prior to charging the system solid, the operator under administrative procedures shall place the keylock switch in the "Low Pressure" position. This action enables the Overpressure Mitigating System. The redundant PORV channels shall remain enabled and operable while the reactor coolant system is not open to the atmosphere or no pressure absorbing volume is established in the pressurizer and the temperature is less than the minimum pressurization temperature for the inservice pressure test, except that one PORV may be out of service for a period of up to seven days. The mass input transient used to determine the PORV setpoint assumed a worse case transient of a single high pressure safety injection pump discharging to the reactor coolant system while the system is solid. Therefore, when the reactor coolant system is less than 275°F, only one high pressure safety injection pump shall be operable at any time except when the reactor coolant system is open to the atmosphere.

The heat input transient used to determine the PORV setpoint assumes a temperature difference between the reactor coolant system and the steam generator of 50°F. Therefore, before starting a reactor coolant pump when the reactor coolant system is solid, the operator shall insure that the secondary temperature of each steam generator is less than 50°F above the temperature of the reactor coolant system unless a pressure absorbing volume has been verified to exist in the pressurizer or steam generator tubes.

TABLE 15.4.1-1 (CONTINUED)

Channel Description	Check	Calibrate	Test	Remarks
24. Containment Pressure	S	R	M**	Narrow range containment pressure (-3.0, +3 psig excluded)
25. Steam Generator Pressure	S***	R	M***	
26. Turbine First State Pressure	S**	R	M**	
27. Emergency Flan Radiation Survey Instruments	Q	R	Q	
28. Environmental Monitors	M	N.A.	N.A.	
29. Overpressure Mitigating	S	R	****	
S - Each Shift		M	-	Monthly
		Q	-	Quarterly
D - Daily		P	-	Prior to each startup if not done previous week
W - Weekly		R	-	Each Refueling Shutdown (But not to exceed 20 months, except for first core cycle)
B/W - Biweekly		NA	-	Not Applicable

** Not required during periods of refueling shutdown, but must be performed prior to starting up if it has not been performed during the previous surveillance period.

*** Not required during periods of refueling shutdown if steam generator vessel temperature is greater than 70°F.

**** Each PORV shall be demonstrated operable by:

- a. Performance of a channel functional test on the PORV actuation channel, but excluding valve operation, within 31 days prior to entering a condition in which the PORV is required operable and at least once per 31 days thereafter when the PORV is required operable.
- b. Testing valve operation in accordance with the inservice test requirements of the ASME Boiler and Pressure Vessel Code, Section IX.