



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

December 11, 1990

TO: ALL LIGHT-WATER REACTOR LICENSEES AND APPLICANTS

SUBJECT: ALTERNATIVE REQUIREMENTS FOR SNUBBER VISUAL INSPECTION INTERVALS AND CORRECTIVE ACTIONS (GENERIC LETTER 90-09)

Technical Specifications (TS) impose surveillance requirements for visual inspection and functional testing of all safety-related snubbers. A visual inspection is the observation of the condition of installed snubbers to identify those that are damaged, degraded, or inoperable as caused by physical means, leakage, corrosion, or environmental exposure. To verify that a snubber can operate within specific performance limits, the licensees perform functional testing that typically involves removing the snubber and testing it on a specially-designed test stand. Functional testing provides a 95 percent confidence level that 90 percent to 100 percent of the snubbers operate within the specified acceptance limits. The performance of visual examinations is a separate process that complements the functional testing program and provides additional confidence in snubber operability.

The TS specifies a schedule for snubber visual inspections that is based on the number of inoperable snubbers found during the previous visual inspection. The schedules for visual inspections and for the functional testing assume that refueling intervals will not exceed 18 months. Because the current schedule for snubber visual inspections is based only on the number of inoperable snubbers found during the previous visual inspection, irrespective of the size of the snubber population, licensees having a large number of snubbers find that the visual inspection schedule is excessively restrictive. Some licensees have spent a significant amount of resources and have subjected plant personnel to unnecessary radiological exposure to comply with the visual examination requirements.

To alleviate this situation, the staff has developed an alternate schedule for visual inspections that maintains the same confidence level as the existing schedule and generally will allow the licensee to perform visual inspections and corrective actions during plant outages. Because this line-item TS improvement will reduce future occupational radiation exposure and is highly cost effective, the alternative inspection schedule is consistent with the Commission's policy statement on TS Improvements.

The alternative inspection schedule is based on the number of unacceptable snubbers found during the previous inspection in proportion to the sizes of the various snubber populations or categories. A snubber is considered unacceptable if it fails the acceptance criteria of the visual inspection. The alternative inspection interval is based on a fuel cycle of up to 24 months and may

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be as long as two fuel cycles, or 48 months for plants with other fuel cycles, depending on the number of unacceptable snubbers found during the previous visual inspection.

Guidance on implementing the alternative TS requirements for visual inspection intervals is provided in Enclosures A and B. Licensees and applicants are encouraged to propose changes to their TS that are consistent with this guidance. The NRC project manager will expeditiously review conforming amendment requests for the facility. Questions on this matter should be addressed to the contact listed below or to the project manager.

This request is covered by Office of Management and Budget Clearance Number 3150-0011, which expires January 31, 1991. The estimated average number of burden hours is 40 person hours per licensee response, including searching data sources, gathering and analyzing the information, and writing the requested reports. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Information and Records Management Branch, Division of Information Support Services, Office of Information and Resources Management, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555; and to the Paperwork Reduction Project (3150-0011), Office of Management and Budget, Washington, DC 20503.

Sincerely,



James G. Partlow  
Associate Director for Projects  
Office of Nuclear Reactor Regulation

Enclosure:  
As stated

Contact: Jai Rajan (301) 492-0788

**ALTERNATIVE REQUIREMENTS FOR DETERMINING THE INTERVAL  
FOR THE VISUAL INSPECTION OF SNUBBERS**

An alternate method for determining the next interval for the visual inspection of snubbers is provided based upon the number of unacceptable snubbers found during the previous inspection, the total population or category size for each snubber type, and the previous inspection interval. A snubber is considered unacceptable if it fails to satisfy the acceptance criteria of the visual inspection. Snubbers may be categorized, based upon their accessibility during power operation, as accessible or inaccessible. These categories may be examined separately or jointly. However, the licensee must make and document that decision before any inspection and shall use that decision as the basis upon which to determine the next inspection interval for that category.

If a licensee's review and evaluation can not justify continued operation with an unacceptable snubber, the licensee shall declare the snubber inoperable and shall meet the applicable action requirements. To determine the next surveillance interval, the licensee may reclassify an unacceptable snubber as acceptable if it can be demonstrated that the snubber is operable in its as-found condition by the performance of a functional test and if it satisfies the acceptance criteria for functional testing.

The next visual inspection interval may be twice, the same, or reduced by as much as two-thirds of the previous inspection interval. This interval depends on the number of unacceptable snubbers found in proportion to the size of the population or category for each type of snubber included in the previous inspection. Table 4.7-2 in Enclosure B replaces the existing TS requirements for determining the next visual inspection interval. Generally, the existing TS requirements establish inspection intervals of 18 months (the length of a nominal fuel cycle) or a fraction thereof based on the number of inoperable snubbers of each type for the previous inspection period.

The alternative provided herein allows inspection intervals to be compatible with a 24-month fuel cycle. Also, the interval may be increased to every other refueling outage for plants on a 24-month fuel cycle or up to 48 months for plants with other fuel cycles if few unacceptable snubbers were found from the previous inspection. Table 4.7-2 establishes three limits for determining the next visual inspection interval corresponding to the population or category size for a given type of snubber. The three limits are listed in Columns A, B, and C of Table 4.7-2 for representative sizes of snubber populations or categories. For a population or category that differs from the representative size provided, the values for the limits may be found by interpolation from the limits provided in Columns A, B, and C for determining the next inspection interval. Where the limit for unacceptable snubbers in Columns A, B, or C is determined by interpolation and includes a fractional value, the limit may be reduced to the next lower integer.

The limits in columns A, B, and C of Table 4.7-2 are applied as follows to determine the next inspection interval. If the number of unacceptable snubbers is less than or equal to the number in Column A, the next inspection interval may be twice the previous interval but not greater than 48 months, excluding the TS provisions to extend surveillance intervals. If the number of unacceptable snubbers is greater than the number in Column A but less than or equal to

the number in Column B, the next inspection interval shall be the same as the previous interval. If the number of unacceptable snubbers is equal to or greater than the number in Column C, the next inspection interval shall be reduced to two-thirds of the previous interval. However, if the number of unacceptable snubbers is less than the number in Column C and greater than the number in Column B, the next inspection interval shall be reduced proportionally by a factor that is one-third of the ratio of the difference between the number of unacceptable snubbers and the number in Column B to the difference between the numbers of Columns B and C.

Enclosure B is a sample of the changes that should be proposed for TS that are based upon the format of the current Standard Technical Specifications (STS). For plants that have TS in a format different from the STS, proposed TS changes should be consistent with the changes provided in Enclosure B. The changes for this alternative are underlined, and Table 4.7-2 has been added.

## MODEL TECHNICAL SPECIFICATION CHANGES

SURVEILLANCE REQUIREMENTS

4.7.9 Each snubber shall be demonstrated OPERABLE by the performance of the following augmented inservice inspection program in addition to the requirements of Specification 4.0.5.

a. Inspection Types

As used in this specification, "type of snubber" shall mean snubbers of the same design and manufacturer, irrespective of capacity.

b. Visual Inspections

Snubbers are categorized as inaccessible or accessible during reactor operation. Each of these categories (inaccessible and accessible) may be inspected independently according to the schedule determined by Table 4.7-2. The visual inspection interval for each type of snubber shall be determined based upon the criteria provided in Table 4.7-2 and the first inspection interval determined using this criteria shall be based upon the previous inspection interval as established by the requirements in effect before amendment (\*).

c. Visual Inspection Acceptance Criteria

Visual inspections shall verify that (1) the snubber has no visible indications of damage or impaired OPERABILITY, (2) attachments to the foundation or supporting structure are functional, and (3) fasteners for the attachment of the snubber to the component and to the snubber anchorage are functional. Snubbers which appear inoperable as a result of visual inspections shall be classified as unacceptable and may be reclassified acceptable for the purpose of establishing the next visual inspection interval, provided that (1) the cause of the rejection is clearly established and remedied for that particular snubber and for other snubbers irrespective of type that may be generically susceptible; and (2) the affected snubber is functionally tested in the as-found condition and determined OPERABLE per Specification 4.7.9f. All snubbers found connected to an inoperable common hydraulic fluid reservoir shall be counted as unacceptable for determining the next inspection interval. A review and evaluation shall be performed and documented to justify continued operation with an unacceptable snubber. If continued operation cannot be justified, the snubber shall be declared inoperable and the ACTION requirements shall be met.

\*NRC will include the number of the license amendment that implements this change.

TABLE 4.7-2  
 SNUBBER VISUAL INSPECTION INTERVAL

Population or Category (Notes 1 and 2)	NUMBER OF UNACCEPTABLE SNUBBERS		
	Column A Extend Interval (Notes 3 and 6)	Column B Repeat Interval (Notes 4 and 6)	Column C Reduce Interval (Notes 5 and 6)
1	0	0	1
80	0	0	2
100	0	1	4
150	0	3	8
200	2	5	13
300	5	12	25
400	8	18	36
500	12	24	48
750	20	40	78
1000 or greater	29	56	109

**Note 1:** The next visual inspection interval for a snubber population or category size shall be determined based upon the previous inspection interval and the number of unacceptable snubbers found during that interval. Snubbers may be categorized, based upon their accessibility during power operation, as accessible or inaccessible. These categories may be examined separately or jointly. However, the licensee must make and document that decision before any inspection and shall use that decision as the basis upon which to determine the next inspection interval for that category.

**Note 2:** Interpolation between population or category sizes and the number of unacceptable snubbers is permissible. Use next lower integer for the value of the limit for Columns A, B, or C if that integer includes a fractional value of unacceptable snubbers as determined by interpolation.

**Note 3:** If the number of unacceptable snubbers is equal to or less than the number in Column A, the next inspection interval may be twice the previous interval but not greater than 48 months.

**Note 4:** If the number of unacceptable snubbers is equal to or less than the number in Column B but greater than the number in Column A, the next inspection interval shall be the same as the previous interval.

**Note 5:** If the number of unacceptable snubbers is equal to or greater than the number in Column C, the next inspection interval shall be two-thirds of the previous interval. However, if the number of unacceptable snubbers is less than the number in Column C but greater than the number in Column B, the next interval shall be reduced proportionally by interpolation, that is, the previous interval shall be reduced by a factor that is one-third of the ratio of the difference between the number of unacceptable snubbers found during the previous interval and the number in Column B to the difference in the numbers in Columns B and C.

**Note 6:** The provisions of Specification 4.0.2 are applicable for all inspection intervals up to and including 48 months.

LIST OF RECENTLY ISSUED GENERIC LETTERS

Generic Letter No.	Subject	Date of Issuance	Issued To
89-10 SUPP. 3	CONSIDERATION OF THE RESULTS OF NRC-SPONSORED TESTS OF MOTOR-OPERATED VALVES	10/25/90	ALL LICENSEES OF OPERATING NUCLEAR POWER PLANTS AND HOLDERS OF CONSTRUCTION PERMITS FOR NUCLEAR POWER PLANTS
90-08	SIMULATION FACILITY EXEMPTIONS	08/10/90	ALL HOLDERS OF OPERATING LICENSES OR CONSTRUCTION PERMITS FOR NUCLEAR POWER REACTORS
90-07	OPERATOR LICENSING NATIONAL EXAMINATION SCHEDULE	08/10/90	ALL POWER REACTOR LICENSEES AND APPLICANTS FOR AN OPERATING LICENSE
89-10 SUPP. 2	AVAILABILITY OF PROGRAM DESCRIPTIONS	08/03/90	ALL LICENSEES OF OPERATING NPPs AND HOLDERS OF CPs FOR NPPs
88-20 SUPP. 3	COMPLETION OF CONTAINMENT PERFORMANCE IMPROVEMENT PROGRAM AND FORWARDING OF INSIGHTS FOR USE IN THE INDIVIDUAL PLANT EXAMINATION FOR SEVERE ACCIDENT VULNERABILITIES	07/06/90	ALL LICENSEES HOLDING OLs AND CPs FOR NPP FACILITIES EXCEPT LICENSEES FOR BWRs WITH MARK I CONTAINMENTS
90-06	RESOLUTION OF GI 70, "POWER-OPERATED RELIEF VALVE AND BLOCK VALVE RELIABILITY," AND GI 94, "ADDITIONAL LOW-TEMPERATURE OVERPRESSURE PROTECTION FOR LIGHT-WATER REACTORS," PURSUANT TO 10CFR50.54(f)	06/28/90	ALL PRESSURIZED WATER REACTOR LICENSEES AND CONSTRUCTION PERMIT HOLDERS
90-05	GUIDANCE FOR PERFORMING TEMPORARY NON-CODE REPAIR OF ASME CODE CLASS 1,2,83 PIPING	06/15/90	ALL HOLDERS OF OPERATING LICENSES FOR NPPs
89-10 SUPP. 1	RESULTS OF THE PUBLIC WORKSHOP	06/13/90	ALL LICENSEES OF OPERATING NPPs AND HOLDERS OF CPs

Guidance on implementing the alternative TS requirements for visual inspection intervals is provided in Enclosures A and B. Licensees and applicants are encouraged to propose changes to their TS that are consistent with this guidance. The NRC project manager will expeditiously review conforming amendment requests for the facility. Questions on this matter should be addressed to the contact listed below or to the project manager.

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Sincerely,

Original signed by  
James G. Partlow

James G. Partlow  
Associate Director for Projects  
Office of Nuclear Reactor Regulation

Enclosure:  
As stated

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\*See previous concurrence

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