

## PLANT SYSTEMS

### 3/4.7.10 SNUBBERS

#### LIMITING CONDITIONS FOR OPERATION

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3.7.10 All snubbers utilized on safety related systems shall be OPERABLE. For those snubbers utilized on non-safety related systems, each snubber shall be OPERABLE if a failure of that snubber or the failure of the non-safety related system would have an adverse effect on any safety related system.

APPLICABILITY: MODES 1, 2, 3 and 4. (MODES 5 and 6 for snubbers located on systems required OPERABLE in those MODES).

ACTION: With one or more snubbers inoperable, within 72 hours replace or restore the inoperable snubber(s) to OPERABLE status and perform an engineering evaluation per Specification 4.7.10.c on the supported component or declare the supported system inoperable and follow the appropriate ACTION statement for that system.

#### SURVEILLANCE REQUIREMENTS

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4.7.10 Each snubber shall be demonstrated OPERABLE by performance of the following augmented inservice inspection program and the requirements of Specification 4.0.5.

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

a. Visual Inspection

Snubbers are categorized as accessible or inaccessible during reactor operation. Each of the categories (accessible and inaccessible) may be inspected independently according to the schedule determined by the following table and the visual inspection interval for each type of snubber shall be determined based upon the criteria provided in that table.

PLANT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

4.7.10.a (continued)

SNUBBER VISUAL INSPECTION INTERVAL

NUMBER OF UNACCEPTABLE SNUBBERS

Population or Category (Notes 1 and 2)	Column A Extend Interval (Notes 3 and 4)	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 more	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 are categorized, based on their accessibility during power operation, as accessible or inaccessible. These categories may be examined separately or jointly. However, the licensee must decide upon that categorization and document that decision before any inspection and shall use that decision as the basis for determining the next inspection interval for that category.

Note 2: Interpolation between population or category sizes and the number of unacceptable snubbers is permissible. If the results of the interpolation is a fractional value, round off the results to the next lower integer to establish the applicable number of unacceptable snubbers for each column.

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.

## PLANT SYSTEMS

### SURVEILLANCE REQUIREMENTS (Continued)

#### 4.7.10.a (continued)

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.

#### b. 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 secure, (3) fasteners for the attachment of the snubber to the component and to the snubber anchorage are functional, and (4) in those locations where snubber movement can be manually induced without disconnecting the snubber, that the snubber has freedom of movement and is not frozen up.

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, providing 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 shall be functionally tested in the as found condition and determined OPERABLE per Specification 4.7.10.d and 4.7.10.e.

## PLANT SYSTEMS

### SURVEILLANCE REQUIREMENTS (Continued)

#### 4.7.10.b (continued)

All snubbers found connected to an inoperable common hydraulic fluid reservoir shall be counted as unacceptable for determining the next visual 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.

When hydraulic snubbers which have uncovered fluid ports are tested for operability, the test shall be performed by starting with the piston at the as-found setting and extending the piston rod in the tension mode direction. Snubbers which have been determined to be inoperable as a result of unexpected transients, isolated damage, or other random events, and cannot be proven operable by functional testing for the same reasons, shall not be counted in determining the next visual inspection period when the provision in 4.7.10.c that failures are subject to an engineering evaluation of component structural integrity has been met and equipment has been restored to an operable state via repair and/or replacement as necessary.

#### c. Functional Tests

At least once per 18 months during shutdown, a representative sample of small bore snubbers which follows the expression  $35[1+c/2]$ , where  $c=2$  is the allowable number of small bore snubbers not meeting the acceptance criteria selected by the operator, shall be functionally tested either in-place or in a bench test. For each number of small bore snubbers above "c" which does not meet the functional test acceptance criteria for Specification 4.7.10.d or 4.7.10.e, an additional sample selected according to the expression  $35(1+c/2)(2/(c+1))^2(a-c)$  shall be functionally tested, where "a" is a total number of small bore snubbers found inoperable during the functional testing or the representative sample.

Functional testing shall continue according to the expression  $b[35(1+c/2)(2/(c+1))^2]$  where "b" is the number of snubbers found inoperable in the previous re-sample, until no additional inoperable snubbers are found within a sample or until all small bore snubbers have been functionally tested.

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APPLICABILITY: MODES 1, 2, 3 and 4. (MODES 5 and 6 for snubbers located on systems required OPERABLE in those MODES).

ACTION: With one or more snubbers inoperable, within 72 hours replace or restore the inoperable snubber(s) to OPERABLE status and perform an engineering evaluation per Specification 4.7.10.c on the supported component or declare the supported system inoperable and follow the appropriate ACTION statement for that system.

#### SURVEILLANCE REQUIREMENTS

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4.7.10 Each snubber shall be demonstrated OPERABLE by performance of the following augmented inservice inspection program and the requirements of Specification 4.0.5.

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

a. Visual Inspection

Snubbers are categorized as accessible or inaccessible during reactor operation. Each of the categories (accessible and inaccessible) may be inspected independently according to the schedule determined by the following table and the visual inspection interval for each type of snubber shall be determined based upon the criteria provided in that table.



## PLANT SYSTEMS

### SURVEILLANCE REQUIREMENTS (Continued)

4.7.10.a (continued)

#### SNUBBER VISUAL INSPECTION INTERVAL

Population or Category (Notes 1 and 2)	<u>NUMBER OF UNACCEPTABLE SNUBBERS</u>		
	Column A Extend Interval (Notes 3 and 4)	Column B Repeat Interval (Notes 4 and 6)	Column C Reduce Interval (Notes 5 and 6)
1	0	0	1
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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 are categorized, based on their accessibility during power operation, as accessible or inaccessible. These categories may be examined separately or jointly. However, the licensee must decide upon that categorization and document that decision before any inspection and shall use that decision as the basis for determining the next inspection interval for that category.

Note 2: Interpolation between population or category sizes and the number of unacceptable snubbers is permissible. If the results of the interpolation is a fractional value, round off the results to the next lower integer to establish the applicable number of unacceptable snubbers for each column.

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.

## PLANT SYSTEMS

### SURVEILLANCE REQUIREMENTS (Continued)

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#### 4.7.10.a (continued)

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.

#### b. 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 secure, (3) fasteners for the attachment of the snubber to the component and to the snubber anchorage are functional, and (4) in those locations where snubber movement can be manually induced without disconnecting the snubber, that the snubber has freedom of movement and is not frozen up.

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## PLANT SYSTEMS

### SURVEILLANCE REQUIREMENTS (Continued)

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#### 4.7.10.b (continued)

All snubbers found connected to an inoperable common hydraulic fluid reservoir shall be counted as unacceptable for determining the next visual 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.

When hydraulic snubbers which have uncovered fluid ports are tested for operability, the test shall be performed by starting with the piston at the as-found setting and extending the piston rod in the tension mode direction. Snubbers which have been determined to be inoperable as a result of unexpected transients, isolated damage, or other random events, and cannot be proven operable by functional testing for the same reasons, shall not be counted in determining the next visual inspection period when the provision in 4.7.10.c that failures are subject to an engineering evaluation of component structural integrity has been met and equipment has been restored to an operable state via repair and/or replacement as necessary.

#### c. Functional Tests

At least once per 18 months during shutdown, a representative sample of small bore snubbers which follows the expression  $35[1+c/2]$ , where  $c=2$  is the allowable number of small bore snubbers not meeting the acceptance criteria selected by the operator, shall be functionally tested either in-place or in a bench test. For each number of small bore snubbers above "c" which does not meet the functional test acceptance criteria for Specification 4.7.10.d or 4.7.10.e, an additional sample selected according to the expression  $35(1+c/2)(2/(c+1))^2(a-c)$  shall be functionally tested, where "a" is a total number of small bore snubbers found inoperable during the functional testing or the representative sample.

Functional testing shall continue according to the expression  $b[35(1+c/2)(2/(c+1))^2]$  where "b" is the number of snubbers found inoperable in the previous re-sample, until no additional inoperable snubbers are found within a sample or until all small bore snubbers have been functionally tested.



ATTACHMENT THREE

DETERMINATION OF NO SIGNIFICANT HAZARDS

### SIGNIFICANT HAZARDS CONSIDERATION

We have reviewed the proposed changes to Technical Specification 3/4.7.10 against the criteria of 10 CFR 50.92 and found that the proposed changes do not involve a significant hazards consideration. Specifically, the proposed changes provide a visual inspection program consistent with the guidance of the NRC's Generic Letter 90-09, "Alternative Requirements for Snubber Visual Inspection Intervals and Corrective Actions," dated December 11, 1990, which will continue to provide assurance that snubber reliability will be maintained. Operation of the North Anna Power Station in accordance with the proposed changes will not:

1. Involve a significant increase in the probability of occurrence or consequences of any accident or malfunction of equipment which is important to safety and which has been evaluated in the UFSAR because the snubber functional inspection program will not be changed and will continue to provide a 95% confidence level that at least 90% of the snubbers will be operable at any time. The modified visual inspection program will continue to enhance the reliability achieved by the functional testing. This confidence level (reliability) is equivalent to that provided by the existing snubber inspection requirements. Plant equipment and system operation are not being modified or changed.
2. Create the possibility of a new or different type of accident from those previously evaluated in the safety analysis report. By maintaining the level of confidence (reliability) with the proposed snubber inspection program there is no impact on plant design or operation. Plant equipment and system operation are not being modified or changed. Therefore, no new accidents could be created from those previously analyzed in the safety analysis report.
3. Involve a significant reduction in the margin of safety. No physical plant modifications, changes in plant operations, or changes in accident analysis assumptions are being made. The proposed snubber inspection requirements will continue to provide the same level of reliability as the existing inspection requirements. Therefore, the accident analysis assumptions remain bounding and safety margins remain unchanged.

Therefore, pursuant to 10 CFR 50.92, based on the above consideration, it has been determined that this change will not involve a significant hazards consideration.