

ATTACHMENT I to JPN-92-013

REVISED PAGES 145b and 156 TO  
PROPOSED TECHNICAL SPECIFICATION CHANGE  
SNUBBER VISUAL INSPECTION SCHEDULE

(JPTS-91-011)

New York Power Authority

JAMES A. FITZPATRICK NUCLEAR POWER PLANT  
Docket No. 50-333  
DPR-59

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3.6 (cont'd)

I. Shock Suppressors (Snubbers)

Applicability

Applies to the operational status of the shock suppressors (snubbers).

Objective

To assure the capability of the snubbers to:

- Prevent unrestrained pipe motion under dynamic loads as might occur during an earthquake or severe transient, and
- Allow normal thermal motion during startup and shutdown.

Specification

1. During all modes of operation except Cold Shutdown and Refueling, all snubbers which are required to protect the primary coolant system or any other safety related system or component shall be operable. During Cold Shutdown or Refueling mode of operation, only those snubbers shall be operable which are on systems that are required to be operable in these modes.

4.6 (cont'd)

I. Shock Suppressors (Snubbers)

Applicability

Applies to the periodic testing requirement for the shock suppressors (snubbers).

Objective

To assure the capability of the snubbers to perform their intended functions.

Specification

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

1. All snubbers shall be categorized into two groups: those accessible and those inaccessible during reactor operation. The visual inspection interval for each category of snubbers shall be determined based upon the criteria provided in Table 4.6-1.

## 3.6 and 4.6 BASES (cont'd)

H. (DELETED)

I. Shock Suppressors

Snubbers are designed to prevent unrestrained pipe motion under dynamic loads as might occur during an earthquake or severe transient, while allowing normal thermal motion during startup and shutdown. The consequence of an inoperable snubber is an increase in the probability of structural damage to piping as a result of a seismic or other event initiating dynamic loads. It is therefore required that all snubbers required to protect the primary coolant system or any other safety system or component be operable during reactor operation. Snubbers excluded from this inspection program are those installed on non-safety related systems and then only if their failure or failure of the system on which they are installed would have no adverse effect on any safety-related system. Because the snubber protection is required only during low probability events, a period of 72 hours (for normal operation) or 7 days (for cold shutdown or refueling mode of operation) is allowed for repairs or replacement of the snubber prior to taking any other action. Following the 72 hour (or 7 day) period, the supported system must be declared inoperable and the Limiting Condition of Operation statement for the supported system followed. As an alternative to snubber repair or replacement an engineering evaluation may be performed: to show that the inoperable snubber is unnecessary to assure operability of the system or to meet the design criteria of the system; and, to remove the snubber from the system. With one or more snubbers found inoperable, within 72 hours a visual inspection shall be performed on the

supported component(s) associated with the inoperable snubber(s) and the results shall be documented. For all modes of operation except Cold Shutdown and Refueling, within 14 days an engineering evaluation shall be performed to ensure that the inoperable snubber(s) has not adversely affected the supported component(s). For Cold Shutdown or refueling mode, this evaluation shall be completed within 30 days. A period of 7 days has been selected for repair or replacement of the inoperable snubber during cold shutdown or refueling mode of operation because in these modes the relative probability of structural damage to the piping systems would be lower due to lower values of total stresses on the piping systems. In case a shutdown is required, the allowance of 36 hours to reach a cold shutdown condition will permit an orderly shutdown consistent with standard operating procedures.

The visual inspection frequency is based upon maintaining a constant level of snubber protection to systems. Therefore, the required inspection interval varies inversely with the observed snubber failures and is determined by the number of inoperable snubbers found during an inspection. Inspections performed before that interval has elapsed may be used as a new reference point to determine the next inspection. The inspections are performed for each category of snubbers. The snubbers are categorized by accessibility (i.e., accessible or inaccessible during reactor operation). The next visual inspection for each category 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 total number of snubbers

**REVISION 1 TO SAFETY EVALUATION FOR  
PROPOSED TECHNICAL SPECIFICATION CHANGES  
SNUBBER VISUAL INSPECTION SCHEDULE (JPTS-91-011)**

**I. DESCRIPTION OF THE PROPOSED CHANGES**

This application for an amendment to the James A. FitzPatrick Technical Specifications proposes a revised schedule for visual inspection of shock suppressors (snubbers). The proposed changes are as follows:

Page vi, List of Tables Item 4.6-1

Replace the title "Comparison of the James A. FitzPatrick Nuclear Power Plant Inservice Inspection Program to ASME Inservice Inspection Code Requirements" and page "157" with the following title "Snubber Visual Inspection Interval" and page "161."

Page 145b, Specification 4.6.1.1

Delete the column titles, "LIMITING CONDITION FOR OPERATION" and "SURVEILLANCE REQUIREMENT."

Replace

"Snubbers shall be visually inspected in accordance with the following schedule:

<u>No. Inoperable Snubbers per Inspection Period</u>	<u>Subsequent Visual Inspection Period *#</u>
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 or more	31 days $\pm$ 25%

\* The inspection interval may not be extended more than one step at the time."

with

"All snubbers shall be categorized into two groups: those accessible and those inaccessible during reactor operation. The visual inspection interval for each category of snubbers shall be determined based upon the criteria provided in Table 4.6-1."

Page 145c, Specifications 3.6.1.2 and 4.6.1.1

Move the beginning of Specification 3.6.1.2 from page 145b to the top of the first column.

Attachment II to JPN-92-013  
SAFETY EVALUATION (REVISION 1)  
Page 2 of 5

From Specification 4.6.1.1, delete the footnote:

\*# The snubbers may be categorized into two groups: Those accessible and those inaccessible during reactor operation. Each group may be inspected independently in accordance with the above schedule.\*

Page 145d, Specifications 4.6.1.2 and 4.6.1.3

Move the remainder of Specification 4.6.1.2 and all of Specification 4.6.1.3 to the end of the second column of page 145c.

Page 145e, Specification 4.6.1.4

Move the remainder of Specification 4.6.1.4 to the end of the second column of page 145d.

Page 156a, Bases 3.6 and 4.6.1

Replace the sentence

"However, the results of such early inspection performed before the original required time interval has elapsed (nominal time less 25%) may not be used to lengthen the required inspection interval."

with the following paragraph

"The inspections are performed for each category of snubbers. The snubbers are categorized by accessibility (i.e., accessible or inaccessible during reactor operation). The next visual inspection for each category 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 total number of snubbers in each category from the previous inspection. The intervals may be increased up to 48 months if few unacceptable snubbers are found in the previous inspection. The visual inspection interval will not exceed 48 months. However, as for all surveillance activities, unless otherwise noted, allowable tolerances of 25% are applicable for snubbers. Table 4.6-1 establishes three limits for determining the next visual inspection interval corresponding to the population of each category of snubbers. For a category that differs from the representative sizes provided, the values for the next inspection interval may be found by interpolation from the limits provided in Columns A, B, and C. 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 first inspection interval determined using Table 4.6-1 shall be based upon the previous inspection interval as established by the requirements in effect before amendment ( )."

Page 156a, Bases 3.6 and 4.6.1

Move the starting point of the paragraph "The visual inspection frequency ...", to the end of the second column of page 156.

Page 157-162, Intentionally Blank

Replace the phrase "through and including 162" with the phrase "through and including 160".

Renumber the pages as "157-160."

Pages 161 and 162, Table 4.6-1

Insert a new Table 4.6-1, "Snubber Visual Inspection Interval."

**II. PURPOSE OF THE PROPOSED CHANGES**

The proposed changes to Section 4.6.1 of the James A. FitzPatrick Technical Specifications revise the schedule for visual inspection of snubbers consistent with the guidance provided in Generic Letter 90-09 (Reference 3). The revised visual inspection schedule is based on the number of unacceptable snubbers found during the previous inspection, the size of the various snubber populations or categories and the length of the previous inspection interval.

**III. SAFETY IMPLICATIONS OF THE PROPOSED CHANGES**

Snubbers are designed to prevent unrestrained pipe motion under dynamic loads as might occur during an earthquake or severe transient, while allowing normal thermal motion during startup and shutdown. These snubbers - mechanical and hydraulic, provide protection to the primary coolant system and other safety related components.

To ensure that the snubbers properly perform their intended function, they are subjected to periodic functional and visual inspections. Functional tests verify that snubbers can operate within specific parameter limits. Visual inspections are the observation of the condition of installed snubbers to identify those that are damaged, degraded, or inoperable. Visual examinations complement the functional testing program and provide additional assurance of snubber operability.

The existing surveillance interval is based on an eighteen month operating cycle and the number of inoperable snubbers found during the previous inspection, regardless of the number of snubbers in that category. These criteria can result in excessive radiological personnel exposures and can entail a significant amount of site resources which the alternate schedule will eliminate. This reduction is consistent with the Commission's policy statement on Technical Specification improvements.

Although the new visual inspection schedule will change the methodology used in determining the duration between visual inspections for the snubbers, the snubbers are still inspected based on the number of unacceptable snubbers. There will be no changes to the interval for functional inspections which is based on the operating cycle. The proposed inspection interval was developed based on an operating cycle of up to 24 months while maintaining the same confidence level in snubber operability.

The grouping of snubbers allows each group to be inspected based on the failure rates for that particular grouping. Groups which fail visual inspection can therefore be inspected more frequently without requiring all snubbers to be inspected at the same rate. By concentrating plant resources on those snubbers which require increased visual inspection, these changes improve plant maintenance while decreasing personnel radiation exposures.

#### IV. EVALUATION OF SIGNIFICANT HAZARDS CONSIDERATION

Operation of the FitzPatrick plant in accordance with the proposed Amendment would not involve a significant hazards consideration as defined in 10 CFR 50.92, since it would not:

1. involve a significant increase in the probability or consequences of an accident previously evaluated.

The proposed changes involve no hardware changes, no changes to the operation of the snubbers, and do not change the ability of the snubbers to perform their intended functions. An increase in visual inspection frequency will not affect the confidence level in operability developed from functional testing.

2. create the possibility of a new or different kind of accident from those previously evaluated.

The proposed changes involve no hardware changes, no changes to the operation of the snubbers, and do not change the ability of the snubbers to perform their intended functions. The new visual inspection interval does not change the level of confidence in snubber operability developed from functional testing and therefore no unreviewed failure mechanism can result.

3. involve a significant reduction in the margin of safety.

The proposed changes involve no hardware changes, no changes to the operation of the snubbers, and do not change the ability of the snubbers to perform their intended functions. The proposed amendment incorporates the alternate Technical Specification requirements for visual inspection of snubbers identified in Generic Letter 90-09. The alternate visual inspection criteria consider the size of the category of snubbers when evaluating inspection intervals due to failure rates. They do not

reduce the confidence level in snubber operability. The functional testing requirements remain unchanged and do not reduce operability confidence levels.

#### **V. IMPLEMENTATION OF THE PROPOSED CHANGES**

Implementation of the proposed changes will not adversely affect the ALARA or Fire Protection Program at the FitzPatrick plant, nor will the changes impact the environment. The results of these changes are expected to reduce the dose to plant personnel since the number of inspections performed in close proximity to radiological sources will be reduced. The proposed changes will not change the inspection methodology currently in place and therefore can have no impact on the Fire Protection program or the environment.

#### **VI. CONCLUSION**

These changes, as proposed, do not constitute an unreviewed safety question as defined in 10 CFR 50.59. That is, they:

- a. will not increase the probability of occurrence or the consequences of an accident or malfunction of equipment important to safety previously evaluated in the safety analysis report;
- b. will not increase the possibility for an accident or malfunction of a type different from any evaluated previously in the safety analysis report;
- c. will not reduce the margin of safety as defined in the basis for any technical specification; and
- d. involves no significant hazards consideration, as defined in 10 CFR 50.92.

#### **VII. REFERENCES**

1. James A. FitzPatrick Nuclear Power Plant Updated Final Safety Analysis Report, Section 12.5.4.
2. James A. FitzPatrick Nuclear Power Plant Safety Evaluation Report (SER), dated November 20, 1972, and Supplements.
3. NRC Generic Letter 90-09, "Alternative Requirements for Snubber Visual Inspection Intervals and Corrective Actions", dated December 11, 1990.
4. NYPA letter, J. C. Brons to the NRC, dated December 28, 1990, (JPN-90-078, IPN-90-060), "New Projects."