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SUBJECT: Forwards replacement pages to 840727 proposed change to Tech Specs re safety-related hydraulic & mechanical snubbers,per NRC request for addl info.

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Corbin A. McNeill
Senior Vice President
Nuclear Generation

January 18, 1985
JPN-85-05

Director of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Attention: Mr. Domenic B. Vassallo, Chief
Operating Reactors Branch No. 2
Division of Licensing

Subject: James A. FitzPatrick Nuclear Power Plant
Docket No. 50-333
Proposed Changes to Technical Specifications
Regarding Safety Related Hydraulic and Mechanical
Snubbers (PTS-81-03)

Reference: 1. NYPA letter, J. P. Bayne to
D. B. Vassallo, dated July 27, 1984
(JPN-84-51) regarding same subject.

Dear Sir:

Attachment I to this letter replaces Attachment I of Reference 1 in its entirety. This attachment is the proposed changes to the Technical Specifications which have been revised to include additional information requested by your staff.

If you have any questions, please contact Mr. J. A. Gray, Jr. of my staff.

Very truly yours,

Corbin A. McNeill, Jr.
Senior Vice President
Nuclear Generation

cc: Office of the Resident Inspector
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1/1

ATTACHMENT I TO JPN-85-05

PROPOSED TECHNICAL SPECIFICATION CHANGES

RELATED TO

SNUBBER SURVEILLANCE

NEW YORK POWER AUTHORITY
JAMES A. FITZPATRICK NUCLEAR POWER PLANT
DOCKET NO. 50-333

LIST OF TABLES (CONT'D)

LIMITING CONDITION FOR OPERATION

3.6 (cont'd)

3.6.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.

2. With one or more snubbers inoperable, within 72 hours during normal operation, or within 7 days

SURVEILLANCE REQUIREMENT

4.6 (cont'd)

4.6.I Shock Suppressors (Snubbers)

Applicability

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

Objective

To assure the operability 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. Snubbers shall be visually inspected in accordance with the following schedule:

No. Inoperable Snubbers per Inspection Period	Subsequent Visual Inspection Period *#
0	18 months ± 25%
1	12 months ± 25%
2	6 months ± 25%
3,4	124 days ± 25%
5,6,7	62 days ± 25%
8 or more	31 days ± 25%

* The inspection interval may not be extended more than one step at a time.

3.6 (cont'd)

during Cold Shutdown or Refueling mode of operation for systems which are required to be operable in these modes, complete <u>one</u> of the following:

a. replace or restore the inoperable snubber(s) to operable status or,

b. declare the supported system inoperable and follow the appropriate limiting condition for operation statement for that system, or,

c. perform an engineering evaluation to demonstrate the inoperable snubber is unnecessary to assure operabiltiy of the system or to meet the design criteria of the system, <u>and</u> remove the snubber from the system.

3. With one or more snubbers found inoperable, within 72 hours perform a visual inspection of the supported component(s) associated with the inoperable snubber(s) and document the results. For all modes of operation except Cold Shutdown and Refueling, within 14 days complete an engineering evaluation as per Specification 4.6.I.6 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.

4.6 (cont'd)

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

2. Visual inspection shall verify (1) that there are no visible indications of damage or impaired OPERABILITY, (2) attachments to the foundation or supporting structure are secure, and (3) in those locations where snubber movements can be manully 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 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 Specifications 4.6.I.7 or 4.6.I.8, as applicable. Hydraulic snubbers which have lost sufficient fluid to potentially cause uncovering of the fluid reservoir-to-snubber valve assembly port or bottoming of the

4.6 (cont'd)

fluid reservoir piston with the snubber in the fully extended position shall be functionally tested to determine operability.

3. Once each operating cycle, 10% of each type of snubbers shall be functionally tested for operability, either in place or in a bench test. For each unit and subsequent unit that does not meet the requirements of 4.6.I.7 or 4.6.I.8, an additional 10% of that type of snubber shall be functionally tested until no more failures are found, or all units have been tested.

4. The representative sample selected for functionally testing shall include the various configurations, operating environments and the range of size and capacity of snubbers. At least 25% of the snubbers in the representative sample shall include snubbers from the following three categories:

   a. The first snubber away from reactor vessel nozzle.

   b. Snubbers within 5 feet of heavy equipment (valve, pump, turbine, motor, etc.).

   c. Snubbers within 10 feet of the discharge from a safety relief valve.

4.6 (cont'd)

In addition to the regular sample, snubbers which failed the previous functional test shall be retested during the next test period. 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. Test results of these snubbers may not be included for the re-sampling.

5. If any snubber selected for functional testing either fails to lockup or fails to move, i.e., is frozen in place, the cause will be evaluated and if due to manufacturer or design deficiency, 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.

6. For the snubber(s) found inoperable, an engineering evaluation shall be performed on the components which are supported by the snubber(s). The purpose of this engineering evaluation shall be to determine if the components supported by the snubber(s) were adversely affected by the inoperability of the snubber(s) in order to ensure that the supported components remain capable of meeting the designed service requirements.

4.6 (cont'd)

7. The hydraulic snubber functional test shall verify that:

   a. Activation (restraining action) is achieved within the specified range of velocity or acceleration in both tension and compression.

   b. Snubber bleed, or release rate, where required, is within the specified range in compression or tension. For snubbers specifically required not to displace under continuous load, the ability of the snubber to withstand load without displacement shall be verified.

8. The mechanical snubber functional test shall verify that:

   a. The force that initiates free movement of the snubber rod in either tension or compression is less than the specified maximum drag force. Drag force shall not have increased more than 50 % since the last functional test.

   b. Activation (restraining action) is achieved within the specified range of velocity or acceleration in both tension and compression.

4.6 (cont'd)

c. Snubber release rate, where required, is within the specified range in compression or tension. For snubbers specifically required not to displace under continuous load, the ability of the snubber to withstand load without displacement shall be verified.

9. Snubber Service Life Monitoring

A record of the service life of each snubber, whose failure could adversely affect the primary coolant or other safety-related system, 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 as required by specification 6.10.B.13.

At least once per operating cycle, the installation and maintenance records for each snubber, whose failure could adversely affect the primary coolant or other safety related system, 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

4.6 (cont'd)

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.

at ± 10 percent and ± 15 percent of the average speed for the above and below 80 percent power cases, respectively. If the reactor is operating on one pump, the loop select logic trips that pump before making the loop selection.

Requiring the discharge valve of the lower speed loop to remain closed until the speed of the faster pump is below 50 percent of its rated speed provides assurance when going from one to two pump operation that excessive vibration of the jet pump risers will not occur.

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 consequences 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 demonstrate 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.

3.6 and 4.6 BASES (Cont'd)

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. 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. Any inspection whose results require a shorter inspection interval will override the previous schedule. When the cause of the rejection of a snubber is clearly established and remedied for that snubber and for any other snubbers that may be generically susceptible, and verified by inservice functional testing, that snubber may be exempted from being counted as inoperable. Generically susceptible snubbers are those which are of a specific make or model that have the same design features directly related to rejection of the snubber by visual inspection, and are similarly located or exposed to the same environmental conditions such as temperature, radiation, and vibration. When a snubber is found inoperable, an engineering evaluation is performed, in addition to the determination of the snubber mode of failure, in order to determine if any safety-related component or system has been adversely affected by the inoperability of the snubber. The engineering evaluation shall determine whether or not the snubber mode of failure has imparted a significant effect or degradation on the supported component or system.

To provide assurance of snubber functional reliability, a representative sample of the installed snubbers will be functionally tested during each operating cycle. Selection of a representative sample of 10% of each type of safety related snubbers provides a confidence level within acceptable limits that these supports will be in an operable condition. Observed failures of these sample snubbers shall require functional testing of additional units.

Hydraulic snubbers and mechanical snubbers may each be treated as a different entity for the above surveillance programs.

The service life of a snubber is evaluated using manufacturer input and information and also through consideration of the installation and maintenance records (newly installed snubber, seal replaced, spring replaced, in high radiation area, in high temperature area, etc...). The requirement to monitor the snubber service life is included to ensure that the snubbers periodically undergo a performance evaluation in view of their age and operating conditions. These records will provide statistical bases for future consideration of snubber service life. The requirements for the maintenance of records and the snubber service life review are not intended to affect plant operation.

(B) The following records shall be retained for the duration of the Facility Operating License:

1. Records of any drawing changes reflecting facility design modifications made to systems and equipment described in the Final Safety Analysis Report.

2. Records of new and irradiated fuel inventory, fuel transfers and assembly burnup histories.

3. Records of facility radiation and contamination surveys.

4. Records of radiation exposure for all individuals entering radiation control areas.

5. Records of gaseous and liquid radioactive material released to the environs.

6. Records of transient or operational cycles for those facility components identified in Table 6.10-1.

7. Records of training and qualification for current members of the plant staff.

8. Records of in-service inspections performed pursuant to these Technical Specifications.

9. Records of Quality Assurance activities required by the Quality Assurance Manual.

10. Records of reviews performed for changes made to procedures or equipment or reviews of tests and experiments pursuant to 10 CFR 50.59.

11. Records of meetings of the PORC and the SRC.

12. Records for Environmental Qualification which are covered under the provisions of paragraph 6.15.

13. Records of the service life of all hydraulic and mechanical snubbers, whose failure could adversely affect any safety-related system, including the date at which the service life commences and associated installation and maintenance records as of the effective date of this ammendment.

6.11 RADIATION PROTECTION PROGRAM

Procedures for personnel radiation protection shall be prepared and adhered to for all plant operations. These procedures shall be formulated to maintain radiation exposures received during operation and maintenance as far below the limits specified in 10 CFR 20 as practicable. The procedures shall include planning, preparation, and training for operation and maintenance activities. They shall also include exposure allocation, radiation and contamination control techniques, and final debriefing.

Amendment No. 22, 37
Order dated October 24, 1980