



UNITED STATES
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555

April 13, 1992

Docket No. 50-333

Mr. Ralph E. Beedle
Executive Vice President - Nuclear Generation
Power Authority of the State of New York
123 Main Street
White Plains, New York 10601

Dear Mr. Beedle:

SUBJECT: ISSUANCE OF AMENDMENT FOR JAMES A. FITZPATRICK NUCLEAR POWER PLANT
(TAC NO. M82183)

The Commission has issued the enclosed Amendment No. 180 to Facility Operating License No. DPR-59 for the James A. FitzPatrick Nuclear Power Plant. The amendment consists of changes to the Technical Specifications in response to your application transmitted by letter dated November 15, 1991, as supplemented by letter dated March 11, 1992.

The amendment revises the Technical Specification (TS) surveillance requirements regarding visual inspection of snubbers. These revisions are consistent with the guidance provided in Generic Letter 90-09, "Alternative Requirements for Snubber Visual Inspection Intervals and Corrective Actions."

A copy of the related Safety Evaluation is enclosed. A Notice of Issuance will be included in the Commission's next regular biweekly Federal Register notice.

Sincerely,

Brian C. McCabe, Project Manager
Project Directorate I-1
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Enclosures:

1. Amendment No.180 to DPR-59
2. Safety Evaluation

cc w/enclosures:
See next page

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P PDR

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Power Authority of the State of New York

James A. FitzPatrick Nuclear
Power Plant

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DATED: April 13, 1992

AMENDMENT NO. 180 TO FACILITY OPERATING LICENSE NO. DPR-59-FITZPATRICK

Docket File
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J. Calvo, 14/A/4
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C. Cowgill
OGC-WF
D. Hagan, 3302 MNBB
G. Hill (4), P-137
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ACRS (10)
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Plant File

April 13, 1992

Docket No. 50-333

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Mr. Ralph E. Beedle
Executive Vice President - Nuclear Generation
Power Authority of the State of New York
123 Main Street
White Plains, New York 10601

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The amendment revises the Technical Specification (TS) surveillance requirements regarding visual inspection of snubbers. These revisions are consistent with the guidance provided in Generic Letter 90-09, "Alternative Requirements for Snubber Visual Inspection Intervals and Corrective Actions."

A copy of the related Safety Evaluation is enclosed. A Notice of Issuance will be included in the Commission's next regular biweekly Federal Register notice.

Sincerely,
Original Signed By
Brian C. McCabe, Project Manager
Project Directorate I-1
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Enclosures:

- 1. Amendment No.180 to DPR-59
- 2. Safety Evaluation

cc w/enclosures:
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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555

POWER AUTHORITY OF THE STATE OF NEW YORK

DOCKET NO. 50-333

JAMES A. FITZPATRICK NUCLEAR POWER PLANT

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 180
License No. DPR-59

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Power Authority of the State of New York (the licensee) dated November 15, 1991, and supplemented March 11, 1992, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. DPR-59 is hereby amended to read as follows:

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P PDR

April 13, 1992

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No.180, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of the date of its issuance to be implemented within 30 days.

FOR THE NUCLEAR REGULATORY COMMISSION



Robert A. Capra, Director
Project Directorate I-1
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: April 13, 1992

ATTACHMENT TO LICENSE AMENDMENT NO. 180

FACILITY OPERATING LICENSE NO. DPR-59

DOCKET NO. 50-333

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3.6 (cont'd)

3.6.1 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)

4.6.1 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.

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3.6 (cont'd)

2. With one or more snubbers inoperable, within 72 hours during normal operation, or within 7 days during Cold Shutdown or Refueling mode of operation for systems which are required to be operable in these modes, complete one 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 show the inoperable snubber is unnecessary to assure operability of the system or to meet the design criteria of the system, and 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 4.6.1.6 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)

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 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 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 4.6.1.7 or 4.6.1.8, 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 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 4.6.1.7 or 4.6.1.8, an additional 10% of that type of snubber shall be functionally tested until no more failures are found, or all units have been tested.

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3.6 (cont'd)

4.6 (cont'd)

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.

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.

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3.6 (cont'd)

4.6 (cont'd)

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.

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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 system 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

3.6 and 4.6 BASES (cont'd)

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 (). 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 snubber periodically undergo a performance evaluation in view of the 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.

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Amendment No. ~~96~~, 180,

157-160

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Table 4.6-1

Snubber Visual Inspection Interval

Population ^{1,2} Category	Number of Unacceptable Snubbers		
	Column A ³ Extended Interval	Column B ⁴ Repeat Interval	Column C ⁵ Reduce Interval
1	0	0	1
80	0	0	2
100	0	1	4
150	0	3	8
200	2	5	13
300	5	12	25

- Notes:
1. The next visual inspection interval for the population of a snubber category 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. This decision shall be made and documented before any inspection and used as the basis upon which to determine the next inspection interval for that category.
 2. Interpolation between population or category sizes and the number of unacceptable snubbers is permissible. The next lower integer for the value of the limit for Columns A, B, C shall be used if that integer includes a fractional value of unacceptable snubbers as determined by interpolation.
 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.
 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.

Table 4.6-1 (cont'd)

Snubber Visual Inspection Interval

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 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.



UNITED STATES
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WASHINGTON, D.C. 20555

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 180 TO FACILITY OPERATING LICENSE NO. DPR-59
POWER AUTHORITY OF THE STATE OF NEW YORK
JAMES A. FITZPATRICK NUCLEAR POWER PLANT
DOCKET NO. 50-333

1.0 INTRODUCTION

By letter dated November 15, 1991, as supplemented March 11, 1992, the Power Authority of the State of New York (the licensee) submitted a request for changes to the James A. FitzPatrick Nuclear Power Plant, Technical Specifications (TS). The requested changes would revise the schedule for visual inspection of snubbers in T.S. 4.6.I in response to the guidance provided in the NRC's Generic Letter (GL) 90-09, "Alternative Requirements for Snubber Visual Inspection Intervals and Corrective Action." The March 11, 1992, letter provided clarifying information that did not change the initial proposed no significant hazards consideration determination.

2.0 EVALUATION

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 licensee performs 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, in Generic Letter (GL) 90-09 the staff 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 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 be as long as 2 fuel cycles, or 48 months for plants with other fuel cycles, depending on the number of unacceptable snubbers found during the previous visual inspection. The inspection interval may vary by ± 25 percent to coincide with the actual outage.

In its letter dated November 15, 1991, as supplemented March 11, 1992, the licensee proposed changes to TS 4.6.I for the snubber visual examination schedule. Since the alternative inspection schedule proposed by the licensee is consistent with the guidance provided in GL 90-09, the staff finds the proposed changes acceptable.

3.0 STATE CONSULTATION

In accordance with the Commission's regulations, the New York State official was notified of the proposed issuance of the amendment. The State official had no comments.

4.0 ENVIRONMENTAL CONSIDERATION

The amendment changes a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The NRC staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendment involves no significant hazards consideration, and there has been no public comment on such finding (56 FR 66928). Accordingly, the amendment

meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendment.

5.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor:
J. Rajan

Date: April 13, 1992