

February 5, 2001

Mr. Michael Kansler
Sr. Vice President and Chief Operating
Officer
Entergy Nuclear Operations, Inc.
440 Hamilton Avenue
White Plains, NY 10601

SUBJECT: JAMES A. FITZPATRICK NUCLEAR POWER PLANT - AMENDMENT RE:
CHANGES TO THE TECHNICAL SPECIFICATIONS (TSs) FOR THE
SURVEILLANCE TESTING OF CHARCOAL ADSORBERS TO MEET THE
REQUESTED ACTIONS OF GENERIC LETTER (GL) 99-02 (TAC NO. MA7252)

Dear Mr. Kansler:

The Commission has issued the enclosed Amendment No. 269 to Facility Operating License No. DPR-59 for the James A. FitzPatrick Nuclear Power Plant. The amendment consists of changes to the Technical Specifications (TSs) in response to an application by Power Authority of the State of New York (PASNY), dated November 19, 1999, as supplemented by Entergy Nuclear Operations, Inc. (ENO), dated October 12, 2000.

The amendment changes the TS surveillance testing requirements of the charcoal adsorbers in the safety-related ventilation systems to meet the requested actions of GL 99-02, "Laboratory Testing of Nuclear-Grade Activated Charcoal."

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.

On November 21, 2000, PASNY's ownership interest in FitzPatrick was transferred to Entergy Nuclear FitzPatrick, LLC, to possess and use FitzPatrick and to Entergy Nuclear Operations, Inc. to possess, use and operate FitzPatrick. By a letter dated January 26, 2001, ENO states that it adopts the issues and requests previously made by PASNY on behalf of FitzPatrick and pending with the NRC at the time of the license transfer.

M. Kansler

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This amendment changes the current TSs which are not reflected in the Improved TS (ITSs) submittals. You are requested to expedite the submission of the documentation for the ITS and with this you are also requested to provide a schedule for such submission within 15 days of receipt of this letter.

Sincerely,

/RA/

Guy S. Vissing, Sr. Project Manager, Section 1
Project Directorate I
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. 50-333

Enclosures: 1. Amendment No. 269 to DPR-59
2. Safety Evaluation

cc w/encls: See next page

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cc w/encls: See next page

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ACCESSION NO. ML003775680 *Safety evaluation dated 11/9/00 - no major changes were made

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ENTERGY NUCLEAR OPERATIONS, INC.

DOCKET NO. 50-333

JAMES A. FITZPATRICK NUCLEAR POWER PLANT

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 269
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 (PASNY, former licensee)*, dated November 19, 1999, as supplemented by Entergy Nuclear Operations, Inc. (ENO, current licensee)*, dated October 12, 2000;
 - 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:

*The operating license was recently transferred from PASNY to ENO. By a letter dated January 26, 2001, ENO states that it adopts the issues and requests previously made by PASNY on behalf of FitzPatrick and pending with the NRC at the time of the license transfer.

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 269 , 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 and shall be implemented within 30 days.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/ H. Pastis for

Marsha Gamberoni, Chief, Section 1
Project Directorate I
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: February 5, 2001

ATTACHMENT TO LICENSE AMENDMENT NO. 269

FACILITY OPERATING LICENSE NO. DPR-59

DOCKET NO. 50-333

Replace the following pages of the Appendix A Technical Specifications with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

Remove Pages

182
183
183a
191
192
193
196
238
239
243

Insert Pages

182
183
183a
191
192
193
196
238
239
243

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 269 TO FACILITY OPERATING LICENSE NO. DPR-59
ENTERGY NUCLEAR OPERATIONS, INC.
JAMES A. FITZPATRICK NUCLEAR POWER PLANT
DOCKET NO. 50-333

1.0 INTRODUCTION

By letter dated November 19, 1999, as supplemented October 12, 2000, Power Authority of the State of New York (PASNY, the former licensee) submitted a request for changes to the James A. FitzPatrick Nuclear Power Plant Technical Specifications (TSs). The application was supplemented by Entergy Nuclear Operations, Inc. (ENO, the current licensee), dated October 12, 2000. The operating license was transferred on November 9, 2000, from PASNY to ENO.

The requested changes would revise the TS surveillance testing requirements of the charcoal adsorbers in the Standby Gas Treatment System (SBGTS) and the Control Room Emergency Ventilation Air Supply System (CREVASS) to meet the requested actions of Generic Letter (GL) 99-02, "Laboratory Testing of Nuclear-Grade Activated Charcoal." The October 12, 2000, letter provided clarifying information that did not change the initial proposed no significant hazards consideration determination.

2.0 BACKGROUND

Safety-related air-cleaning units used in the engineered safety features (ESF) ventilation systems of nuclear power plants reduce the potential onsite and offsite consequences of a radiological accident by filtering radioiodine. Analyses of design-basis accidents assume particular safety-related charcoal adsorption efficiencies when calculating offsite and control room operator doses. To ensure that the charcoal adsorbers used in these systems will perform in a manner that is consistent with the licensing basis of a facility, licensees have requirements in their TS to periodically perform a laboratory test (in accordance with a test standard) of charcoal samples taken from these ventilation systems.

In GL 99-02, the NRC staff alerted licensees that testing nuclear-grade activated charcoal to standards other than American Society for Testing and Materials (ASTM) D3803-1989, "Standard Test Method for Nuclear-Grade Activated Carbon," does not provide assurance for complying with their current licensing bases with respect to the dose limits of General Design Criterion (GDC) 19 of Appendix A to Part 50 of Title 10 of the Code of Federal Regulations (10 CFR) and Subpart A of 10 CFR Part 100.

GL 99-02 requested that all licensees determine whether their TS reference ASTM D3803-1989 for charcoal adsorber laboratory testing. Licensees whose TS do not reference ASTM D3803-1989 were requested to either amend their TS to reference ASTM D3803-1989 or propose an alternative test protocol.

3.0 EVALUATION

3.1 Laboratory Charcoal Adsorber Sample Testing Surveillance Requirements

The current and proposed laboratory charcoal adsorber sample testing TS surveillance requirements for the SGTS and the CREVASS are shown in Table 1 and Table 2, respectively.

The proposed use of ASTM D3803-1989 is acceptable because it provides accurate and reproducible test results. The proposed test temperature of 30°C is acceptable because it is consistent with ASTM D3803-1989. The proposed test relative humidity (RH) of 70 percent for SGTS is acceptable because the SGTS is equipped with safety-related heaters which are designed to maintain the RH of the air stream less than or equal to 70 percent during an accident. The proposed test RH of 95 percent for the CREVASS is acceptable because it is consistent with ASTM D3803-1989. This ensures that the testing will be consistent with the operation of the ventilation system during accident conditions. This is consistent with the actions requested in GL 99-02.

The charcoal adsorber removal efficiencies which are credited in the licensee's radiological accident analyses for radioactive organic iodide¹ for both systems are 90 percent. The proposed test penetrations² for radioactive methyl iodide¹ for both systems are ≤ 5 percent which results in a safety factor³ of 2 for both systems. The proposed safety factor of 2 is acceptable because it ensures that the efficiency credited in the accident analysis is still valid at the end of the surveillance interval. This is consistent with the minimum safety factor of 2 specified in GL 99-02.

The August 23, 1999 errata to GL 99-02 clarified that if the maximum actual face velocity through the charcoal adsorber is greater than 110 percent of 40 fpm, then the proposed TS amendment should specify the maximum actual face velocity as the test face velocity. The licensee stated in the November 19, 1999 letter that both systems have a nominal face velocity of 40 fpm (± 10 percent) air flow through the charcoal adsorber beds. Therefore, the test face velocity is not specified in the proposed TS amendment. The proposed testing of the charcoal adsorbers will be performed in accordance with ASTM D3803-1989 which specifies a test face velocity of 40 fpm with appropriate tolerances. This is acceptable because it ensures that the testing will be consistent with the operation of the ventilation system during accident conditions. This is consistent with the August 23, 1999, errata to GL 99-02.

¹ Organic iodide and elemental iodine are the forms of iodine that will be released during a design basis radiological accident that the charcoal adsorbers are designed to adsorb. Organic iodide is more difficult for charcoal to adsorb than elemental iodine. Therefore, the laboratory test to determine the performance of the charcoal adsorber is based on organic iodide. Methyl iodide is the organic form of iodine that is used in the laboratory test.

² Penetration is defined as the exit concentration of a given gas from an air cleaning device, expressed as a percentage of inlet concentration (or 100 percent minus adsorber efficiency).

³ The safety factor is the ratio of the credited penetration to the test penetration.

4.0 CONCLUSION ON THE TECHNICAL EVALUATION

In view of the above, and because the staff considers ASTM D3803-1989 to be the most accurate and most realistic protocol for testing charcoal adsorbers in safety-related ventilation systems, the staff finds that the proposed TS changes satisfy the actions requested in GL 99-02 and are acceptable.

5.0 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.

6.0 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 (65 FR 6410). 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.

7.0 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. Segala

Date: February 5, 2001

JAMES A. FITZPATRICK NUCLEAR POWER PLANT

TABLE 1 - CURRENT TS REQUIREMENTS											
System Description						Current TS Requirements					
TS Section	System	Bed Thickness (inches)	Actual Charcoal		Credited Efficiency (% organic iodine)	Test Penetration (% methyl iodide)	Safety Factor	Test Standard	Test Temp (° C)	Test RH	Test Face Velocity (fpm)
			Res. Time (sec)	Face Velocity (fpm)							
4.7.B	Standby Gas Treatment System (SBGTS)	2	0.25	40 ± 10%	99%	1 ^b	Not stated (1) ^d	Not stated	Not stated	70% ^b	Not stated
4.11.A	Control Room Emergency Ventilation Air Supply System (CREVASS)	4 ^a	0.50	40 ± 10%	90%	0.5 ^c	Not stated (20) ^d	Per manufacturer's recommendations ^c	Not stated	Not stated	Not stated

^a Two 2-inch charcoal beds.

^b Per current TS Bases 3.7.C.

^c Per current TS Bases 3.11.A and TS Section 4.11.1.D.

^d Safety factors calculated based on credited efficiency and test penetration.

JAMES A. FITZPATRICK NUCLEAR POWER PLANT

TABLE 2 - PROPOSED TS REQUIREMENTS											
System Description						Proposed TS Requirements					
TS Section	System	Bed Thickness (inches)	Actual Charcoal		Credited Efficiency (% organic iodine)	Test Penetration (% methyl iodide)	Safety Factor	Test Standard	Test Temp (° C)	Test RH	Test Face Velocity (fpm)
			Res. Time (sec)	Face Velocity (fpm)							
4.7.B	Standby Gas Treatment System (SBGTS)	2	0.25	40 ± 10%	90 ^b	≤5	2	ASTM D3803-1989	30	70%	40 ^c
4.11.A	Control Room Emergency Ventilation Air Supply System (CREVASS)	4 ^a	0.50	40 ± 10%	90 ^b	≤5	2	ASTM D3803-1989	30	95%	40 ^c

^a Two 2-inch charcoal beds.

^b Approved in TS Amendment 239.

^c Per ASTM D3803-1989.