



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 181 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 May 30, 1990, as supplemented April 18, 1991, 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 update two tables to reflect the installation of new post-accident monitoring instrumentation. Specifically, instruments installed to satisfy the requirements of Regulatory Guide 1.97 are added to Table 3.2-8, "Accident Monitoring Instrumentation," and Table 4.2-8, "Minimum Test and Calibration Frequency for Accident Monitoring Instrumentation." Technical Specification Tables 3.2-6, "Surveillance Instrumentation," 4.2-6, "Minimum Test and Calibration Frequency for Surveillance Instrumentation," and 4.7-1, "Minimum Test and Calibration Frequency for Containment Monitoring Systems" are deleted, since the function of the old instrumentation is effectively superseded by the new more qualified instruments included in revised Tables 3.2-8 and 4.2-8. The April 18, 1991, letter provided clarifying information that did not change the initial proposed no significant hazards consideration determination.

2.0 EVALUATION

Since the Three Mile Island (TMI) event, significant efforts have been made to identify the relative importance of plant parameter information needed by operators during accidents. This resulted in the various categories of plant parameters published in the NRC's Regulatory Guide (RG) 1.97. Category A is assigned to the plant parameters that "... provide primary information needed to permit the control room operating personnel to take the specified manually controlled actions for which no automatic control is provided and that are required for safety systems to accomplish their safety functions..." The licensee classified the following as Category A parameters:

1. Reactor coolant system pressure
2. Coolant level in reactor vessel

3. Suppression pool water level
4. Suppression pool water temperature
5. Drywell pressure
6. Residual heat removal system flow
7. Drywell temperature
8. Suppression chamber pressure
9. Residual Heat Removal Service Water system flow
10. Containment hydrogen concentration
11. Containment oxygen concentration
12. Core Spray system flow
13. Core Spray system pressure

By letter dated March 14, 1988, the NRC issued a Safety Evaluation regarding conformance with RG 1.97 at the James A. FitzPatrick Nuclear Power Plant. Based on the NRC staff's review, the FitzPatrick plant was found to be in conformance with, or have adequately justified deviations from RG 1.97 for each post-accident monitoring variable with the exception of neutron flux. The existing neutron flux monitoring instrumentation was found to be acceptable pending resolution of technical issues being reviewed by the NRC and the nuclear industry.

The original James A. FitzPatrick Nuclear Power Plant design included instrumentation to provide control room indication which did not have safety-related control or trip functions. Technical Specification (TS) requirements were applied to a selected group of these instruments listed in Table 3.2-6 based upon the operators' need to have a reliable source of information concerning plant status. The TS Bases did not provide a justification for the selection of these specific plant parameters; however, the table reflected good engineering practice. Following issuance of RG 1.97, the licensee performed modifications to upgrade the instrumentation which monitors Category A parameters. The instruments were designed as Category 1 and are qualified for design basis seismic and post-accident environmental conditions. The Technical Specifications are being revised to include these instruments in Table 3.2-8. The associated surveillance requirements for these instruments are added to Table 4.2-8. Table 3.2-8 is also being restructured to conform more closely to the corresponding table in the Standard Technical Specifications (STS) with regard to format and content. Tables 3.2-6 and 4.2-6 are deleted as part of the proposed changes, since the function of the old instrumentation is effectively superseded by the new, more qualified instruments. Table 4.7-1, is being deleted since the instrumentation contained in this table (drywell hydrogen and oxygen concentration) is included in the revised Table 4.2-8.

Three plant parameters will continue to be monitored in the revised Table 3.2-8 even though they are not RG 1.97 Category A variables. These parameters are narrow range torus level, drywell-torus differential pressure, and safety/relief valve (SRV) position indication. Narrow range torus water level and drywell-torus differential pressure instrumentation will be retained in Table 3.2-8 because they are part of the "Mark I Containment Short-Term Improvement" instrumentation. The SRV position indication instrumentation will be included in Table 3.2-8 because it is part of the TMI-2 "Lessons Learned Category 'A'" requirements of NUREG-0578.

Three Table 3.2-6 plant parameters will not be monitored in the revised Table 3.2-8. These parameters, narrow range reactor water level, control rod position indication, and neutron monitoring have alternate requirements which will assure that the instrumentation remains operable. Narrow range reactor water level instrumentation is used during plant operations for proper operation of the feedwater control system. Reactor water level indication is also provided by the overlapping range of the RG 1.97 wide range reactor water level instrumentation as required by Table 3.2-8. Control rod position indication is required by TS 3.3.A.2.d as condition for control rod operability. This instrument check is being retained in a new TS 4.3.A.2.f. The frequency of this surveillance is being changed to once/day to be consistent with the Standard Technical Specifications. Neutron monitoring instrumentation operability requirements are specified in Table 3.1-1, Table 3.2-3, and TS 3.3.B.4.

One of the existing Table 3.2-8 plant parameters will be removed from the revised table. This parameter, drywell water level, is not a RG 1.97 Category A variable and, therefore, should not be included in Table 3.2-8.

The applicable instrument ranges are no longer included in TS Table 3.2-8. Commitments made by the licensee with regard to implementation of RG 1.97 and Generic Letter 83-36 assure that the Table 3.2-8 plant parameters will continue to be measured and indicated in the control room to the full range as reviewed and approved by the NRC staff. This change is consistent with the Standard Technical Specifications.

The proposed change would also modify Action A of Table 3.2-8 to no longer permit the use of alternate monitoring methods when the number of operable instrument channels are less than the required minimum. Other proposed changes are administrative in nature.

The NRC staff has reviewed the proposed TS changes and has determined that they accurately reflect the modifications performed by the licensee to provide a highly reliable and environmentally qualified source of vital plant information in the control room. Furthermore, the changes ensure that instrumentation that would be necessary to assist the operators in mitigation

of accident conditions will be available in the control room. Finally, the proposed changes conform with the acceptance criteria of NUREG-0737, NUREG-0578, Generic Letter 83-36, and RG 1.97. Therefore, 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 and changes to the surveillance requirements. 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 29279). 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:  
F. Paulitz

Date: May 14, 1992

May 14, 1992

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. M76938)

The Commission has issued the enclosed Amendment No. 181 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 May 30, 1990, and supplemented April 18, 1991.

The amendment updates two tables to reflect the installation of new post-accident monitoring instrumentation. Specifically, instruments installed to satisfy the requirements of Regulatory Guide 1.97 are added to Table 3.2-8, "Accident Monitoring Instrumentation," and Table 4.2-8, "Minimum Test and Calibration Frequency for Accident Monitoring Instrumentation." Technical Specification Tables 3.2-6, "Surveillance Instrumentation," 4.2-6, "Minimum Test and Calibration Frequency for Surveillance Instrumentation," and 4.7-1, "Minimum Test and Calibration Frequency for Containment Monitoring Systems," are deleted, since the function of the old instrumentation is effectively superseded by the new more qualified instruments included in revised Tables 3.2-8 and 4.2-8.

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. 181 to DPR-59
- 2. Safety Evaluation

cc w/enclosures:  
See next page

cc: Plant Service List

OFFICE	LA:PDI-1	PM:PDI-1	OGC <i>AB</i>	PDI-1 <i>Ro</i>	
NAME	CSVogan <i>CV</i>	BCMcCabe <i>BC</i>	<i>R. B. ...</i>	RACapra	
DATE	4/13/92	4/16/92	4/23/92	5/14/92	1/1