



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 162 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

INTRODUCTION

By letter dated January 12, 1990, as amended and superseded by letter dated April 20, 1990, the Power Authority of the State of New York (the licensee), proposed changes to the Technical Specifications (TS) for the James A. FitzPatrick Nuclear Power Plant. The proposed changes would modify specifications having cycle-specific parameter limits by replacing the values of those limits with a reference to a Core Operating Limits Report (COLR) which contains the values of those limits. The proposed changes also include the addition of the COLR to the Definitions section and to the reporting requirements in the Administrative Controls section of the TS. Guidance on the proposed changes was developed by the NRC on the basis of the review of a lead-plant proposal submitted on the Oconee plant docket by Duke Power Company. This guidance was provided to all power reactor licensees and applicants by Generic Letter 88-16, dated October 4, 1988.

EVALUATION

The licensee's proposed changes to the TS are in accordance with the guidance provided by Generic Letter 88-16 and are addressed below.

1. The Definition section of the TS was modified to include a definition of the Core Operating Limits Report that requires cycle/reload-specific parameter limits to be established on a unit-specific basis in accordance with NRC-approved methodologies that maintains the limit of the safety analysis. The definition states that plant operation within these limits is addressed in individual Technical Specifications.

2. The following specifications were revised to replace the values of cycle-specific parameter limits with a reference to the COLR that provides these limits.

a. Specification 3.5.H

The Average Planar Linear Heat Generation Rate (APLHGR) limits for this specification are specified in the COLR.

b. Specifications 3.1.B and 4.1.E

The Minimum Critical Power Ratio (MCPR) limits and the MCPR flow adjustment factor K_f for these specifications are specified in the COLR.

c. Specification 3.5.I

The Linear Heat Generation Rate (LHGR) limits for this specification are specified in the COLR.

d. Specification Table 3.1-1

The Reactor Protection System (RPS) flow biased trip settings of Technical Specification Table 3.1-1 are specified in the COLR.

e. Specification Table 3.2-3

The Control Rod Block flow biased APRM and Rod Block Monitor (RBM) rod block settings of Technical Specification Table 3.2-3 are specified in the COLR.

The changes to the specifications also required changes to the Bases to include appropriate reference to the COLR. Based on our review, we conclude that the changes to these Bases are acceptable.

3. Specification 6.9.A.4 was added to the reporting requirements of the Administrative Controls section of the TS. This specification requires that the COLR be submitted, upon issuance, to the NRC Document Control Desk with copies to the Regional Administrator and Resident Inspector. The report provides the values of cycle-specific parameter limits that are applicable for the current fuel cycle. Furthermore, these specifications require that the values of these limits be established using NRC approved methodologies and be consistent with all applicable limits of the safety analysis. The approved methodologies are the following:

- a. "General Electric Standard Application for Reactor Fuel," NEDE-24011-P, latest approved version and amendment.
- b. "James A. FitzPatrick Nuclear Power Plant SAFER/GESTR - LOCA Loss-of-Coolant Accident Analysis," NEDC-31317P, October 1986 including latest errata and addenda.
- c. "Loss of Coolant Accident Analysis for James A. FitzPatrick Nuclear Power Plant," NEDO-21662-2, July 1977 including latest errata and addenda.

Finally, the specification requires that all changes in cycle-specific parameter limits be documented in the COLR before each reload cycle or remaining part of a reload cycle and submitted upon issuance to the NRC, prior to operation with the new parameter limits.

On the basis of the review of the above items, the NRC staff concludes that the licensee provided an acceptable response to those items as addressed in the NRC guidance in Generic Letter 88-16 on modifying cycle-specific parameter limits in TS. Because plant operation continues to be limited in accordance with the value of cycle-specific parameter limits that are established using NRC approved methodologies, the NRC staff concludes that this change is administrative in nature and there is no impact on plant safety as a consequence. Accordingly, the staff finds that the proposed changes are acceptable.

As part of the implementation of Generic Letter 88-16, the staff has also reviewed a sample COLR that was provided by the licensee. As a result of this review and the amended submittal, the staff recommended a number of changes to the draft COLR. In particular, references to design feature of the fuel assemblies will not be include in the COLR. The licensee agreed with the suggested changes. On the basis of this review, the staff concludes that the format and content of the sample COLR are acceptable.

The following additional changes have also been proposed by the licensee in this submittal:

1. Specification 2.1.A.1.c.(1) would be modified to remove the APRM high neutron flux scram trip setting formulas (Run Mode) and replaced them with reference to Table 3.1-1 and Specification 3.5.J which will contain the appropriate limits in accordance with this amendment.
2. Specification 2.1.A.1.d would be modified to remove the APRM rod block trip setting formulas (Run Mode) and replace them with reference to Table 3.2-3 and Specification 3.5.J which will contain the appropriate limits in accordance with this amendment.
3. The value of the MCPR safety limit (1.04) quoted in Bases 1.1 would be removed and the words "Safety Limit" substituted to clarify the meaning of the terminology. Other non-technical, administrative changes were also proposed to this Bases section and Bases Section 2.1.
4. Specification 5.2.A would be modified to remove the specific fuel types from the Reactor Design Features section and insert a more generalized statement which describes the fuel assemblies composition and that they are composed of fuel designs approved by the NRC staff for use in BWRs.

The above changes have been proposed to better consolidate the various limits and information. They are administrative in nature and, therefore, are acceptable.

Another proposed change would modify Section 2.1 Bases to state that transient analyses for Abnormal Operational Transients are performed at the nominal 100 percent power (2436 Mwt) rather than the maximum power level of 2535 Mwt (corresponding to 104 percent power). This method of analysis is based on GEMINI methods and was previously approved in Amendment No. 109. This change is acceptable.

In addition, the licensee has proposed removal of a number of pages that are now labeled as blank or from which the specifications are being moved to other page and will, therefore, become blank. These changes are also administrative and are acceptable.

SUMMARY

We have reviewed the request by the Power Authority of the State of New York to modify the Technical Specifications of the James A. FitzPatrick Nuclear Power Plant that would remove the specific values of some cycle-dependent parameters from the specifications and place the values in a Core Operating Limits Report that would be referenced by the specifications. Based on this review, we conclude that these Technical Specification modifications are acceptable because they are in accordance with Generic Letter 88-16. We have also reviewed the changes to Specification 5.2.A on design features of the reactor core and fuel assemblies and other administrative changes and conclude that they are acceptable.

EXIGENT CIRCUMSTANCES

The Commission's regulations, 10 CFR 50.91, contain provisions for issuance of amendments when the usual 30-day public notice period cannot be met. One type of special exception is an exigency. An exigency is a case where the staff and licensee need to act promptly, but failure to act promptly does not involve a plant shutdown, derating, or delay in startup. The exigency case usually represents an amendment involving a safety enhancement to the plant.

Under such circumstances, the Commission notifies the public in one of two ways: by issuing a Federal Register notice providing an opportunity for hearing and allowing at least two weeks for prior public comments, or by issuing a press release discussing the proposed changes, using the local media. In this case, the Commission used the first approach.

The licensee submitted the request for amendment on January 12, 1990 to incorporate changes to the Technical Specifications to remove cycle-specific parameters in accordance with Generic Letter 88-16. The licensee requested that the amendment be issued prior to May 15, 1990, at which time the plant was expected to startup from the 1990 refueling outage. It was noticed in the Federal Register on March 27, 1990 (55 FR 8234), at which time the staff proposed a no significant hazards consideration determination.

Following discussions with the staff which clarified implementation details of the generic letter, the licensee superseded the original amendment by letter dated April 20, 1990. The only technical change to the original submittal involved relocation of the Fuel Design Features, which lists the different fuel assemblies by coded designators, from the Technical Specifications to the Core Operating Limits Report (COLR). Since this change was not in accordance with the present staff interpretation of the generic letter, the licensee deleted it from the new amendment application. Since this represented a significant change from what was previously noticed, the change was noticed in the Federal Register on April 30, 1990 (55 FR 18042). In this notice the staff proposed to determine that the amended application involved no significant hazards consideration and offered a 15 day comment period in order to enable issuance of the amendment in accordance with the licensee's expected startup date.

The net effect of the change is a more restrictive set of Technical Specifications which state that the fuel assemblies shall be limited to those fuel designs approved by the NRC staff for use in boiling water reactors.

Therefore, the staff is issuing the amendment under exigent circumstances. The licensee did not request emergency treatment of the amended application and the staff does not believe that an emergency situation exists. However, the staff does believe that the amendment should be issued prior to plant startup from the present refueling outage.

There were no public comments in response to the either notices published in the Federal Register.

FINAL NO SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION

The Commissions regulations in 10 CFR 50.92 state that the Commission may make a final determination that a license amendment involves no significant hazards consideration if operation of the facility in accordance with the amendment would not: (1) Involve a significant increase in the probability or consequences of an accident previously evaluated; or (2) Create the possibility of a new or different kind of accident from any accident previously evaluated; or (3) Involve a significant reduction in a margin of safety.

Operation of the facility in accordance with the proposed amendment will not involve a significant increase in the probability or consequences of an accident previously evaluated. The proposed changes which address Generic Letter 88-16 merely move cycle-specific parameter limits from the Technical Specifications to the Core Operating Limits Report. NRC-approved methodologies will continue to be used as the basis for establishing the limits and incorporating the values into the Core Operating Limits Report, thereby ensuring that the proper values are used. The submittal of this document to the NRC will allow the staff to continue to monitor the values and process. The proposed change to the Bases of Section 2.1 (the use of 100 percent power in the analysis of abnormal operational transients using GEMINI methods rather than 104 percent power) has been previously reviewed and approved by the NRC for both generic and FitzPatrick application. It showed that power level measurement uncertainties are accounted for adequately in the Minimum Critical

Power Ratio (MCPR) Operating Limit. The level of confidence that this safety limit will not be violated as a result of a transient is not reduced. Other proposed changes are administrative in nature and serve to clarify terminology.

Operation of the facility in accordance with the proposed amendment will not create the possibility of a new or different kind of accident from any accident previously evaluated. No safety-related equipment, function, or plant operation will be altered as a result of the proposed changes and they do not create any new accident mode. The limits will continue to be in effect and updated as required. The level of document control and quality assurance applied by the licensee to the preparation and use of changes to the Core Operating Limits Report will be equivalent to that applied to the Technical Specification changes. In addition, the MCPR operating limit criteria of Bases Section 2.1 continues to be determined using approved methodology. Other proposed changes are administrative in nature and serve to clarify terminology.

Operation of the facility in accordance with the proposed amendment will not involve a significant reduction in a margin of safety. The Generic Letter 88-16 changes are administrative in nature and involve moving limits from one document to another. They do not impact plant operation. The proposed changes still require operation within the limits determined using NRC-approved methods and appropriate remedial actions be taken if the limits are violated. For the changes to Bases Section 2.1, the MCPR operating limit continues to be determined using an approved methodology that conservatively accounts for power level measurement uncertainties. The same criteria for acceptable operation is maintained. Other proposed changes are administrative in nature and serve to clarify terminology.

Based upon the above considerations, the staff concludes that the amendment meets the three criteria of 10 CFR 50.92. Therefore, the staff has made a final determination that the proposed amendment does not involve a significant hazards consideration.

ENVIRONMENTAL CONSIDERATION

This amendment involves a change to a requirement with respect to the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and changes recordkeeping or reporting requirements. The 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. In addition, the Commission has previously issued a proposed finding that this amendment involves no significant hazards consideration based on the original submittal and there has been no public comment on such finding. Also, the Commission has made a final consideration that the amendment does not involve a significant hazards consideration in this document. Accordingly, this amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR Sec 51.22(c)(9) and 51.22(c)(10). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of this amendment.

CONCLUSION

We have 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, and (2) such activities will be conducted in compliance with the Commission's regulations and the issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public.

Dated: May 31, 1990

PRINCIPAL CONTRIBUTORS:

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