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LIMITING CONDITION FOR OPERATION AND SURVEILLANCE REQUIREMENTS

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BASES

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REACTOR COOLANT SYSTEM

~~CORE BARREL MOVEMENT~~

~~LIMITING CONDITION FOR OPERATION~~

Deleted

3.4.11 Core barrel movement shall be limited to less than the Amplitude Probability Distribution (APD) and Spectral Analysis (SA) Alert Levels for the applicable THERMAL POWER level.

APPLICABILITY: MODE 1.

ACTION:

~~X~~ With the APD and/or SA exceeding their applicable Alert Levels, POWER OPERATION may proceed provided the following actions are taken:

~~X~~ 1. APD shall be measured and processed at least once per 24 hours,

~~X~~ 2. SA shall be measured within 48 hours and at least once per 24 hours thereafter and SA shall be processed at least once per 7 days, and

~~X~~ 3. A Special Report, identifying the cause(s) for exceeding the applicable Alert Level, shall be prepared and submitted to the Commission pursuant to Specification 6.9.2 within 30 days of detection.

~~X~~ With the APD and/or SA exceeding their applicable Action Levels, within 24 hours reduce THERMAL POWER BY $> 25\%$ of RATED THERMAL POWER and demonstrate, through monitoring of the excore neutron detectors, that APD and SA have been reduced to below their applicable Alert Level limits or be in HOT STANDBY within the next 6 hours.

~~X~~ With the measured levels of APD and/or SA differing from their baseline levels by more than 10%, a Special Report describing the measured levels shall be prepared and submitted to the Commission pursuant to Specification 6.9.2 within 10 days of data processing.

REACTOR COOLANT SYSTEM

~~CORE BARREL MOVEMENT (Continued)~~

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SURVEILLANCE REQUIREMENTS

~~4.4.11.1 Baseline Monitoring Core barrel movement Alert Levels and Action Levels, as determined by APD and SA monitoring of the excore neutron detectors, shall be determined at nominal THERMAL POWER levels of 20%, 50%, 80% and 100% of RATED THERMAL POWER during the reactor startup test program; these Alert Levels and Action Levels shall be reported in a Special Report pursuant to Specification 6.9.2 within 31 days after initially reaching 100% of RATED THERMAL POWER.~~

~~4.4.11.2 Routine Monitoring Core barrel movement shall be determined to be less than the APD and SA Alert Levels by using the excore neutron detectors to measure APD and SA at the following frequencies:~~

- ~~a. APD data shall be measured and processed at least once per 7 days~~
- ~~b. SA data shall be measured and processed at least once at nominal THERMAL POWER levels of 20%, 50%, 80% and 100% of RATED THERMAL POWER after each refueling and at least once per 4 months thereafter.~~

~~4.4.11.3 Reports The results of all periodic APD and SA monitoring shall be included in the Annual Operating Report for the period in which the monitoring was performed.~~

REACTOR COOLANT SYSTEM

BASES

The nondestructive testing for repairs on components greater than 2 inches diameter gives a high degree of confidence in the integrity of the system, and will detect any significant defects in and near the new welds. Repairs on components 2 inches in diameter or smaller receive a surface examination which assures a similar standard of integrity. In each case, the leak test will ensure leak tightness during normal operation.

For normal opening and reclosing, the structural integrity of the Reactor Coolant System is unchanged. Therefore, satisfactory performance of a system leak test at 2235 psia following each opening and subsequent reclosing is acceptable demonstration of the system's structural integrity. These leak tests will be conducted within the pressure-temperature limitations for Inservice Leak and Hydrostatic Testing and Figure 3.4-2.

The Safety Class 2 and 3 components will be pressure tested at least once toward the end of each inspection interval (10 years). The Safety Class 2 components having a design temperature above 400°F will be pressure tested at not less than 125 percent of the system design pressure while those components having a design temperature of 400°F and below will be pressure tested at 110 percent of design pressure. The Safety Class 3 components will be pressure tested at the levels indicated in Specification 4.4.10.3b.

3/4.4.11 CORE BARREL MOVEMENT Deleted

~~This specification is provided to ensure early detection of excessive core barrel movement if it should occur. Core barrel movement will be detected by using four excore neutron detectors to obtain Amplitude Probability Distribution (APD) and Special Analysis (SA). Baseline core barrel movement Alert Levels and Action Levels at nominal THERMAL POWER levels of 20%, 50%, 80% and 100% of RATED THERMAL POWER will be determined during the reactor startup test program.~~

~~A modification to the required monitoring program may be justified by an analysis of the data obtained and by an examination of the affected parts during the plant shutdown at the end of the first fuel cycle.~~

ATTACHMENT 2

SAFETY EVALUATION

Introduction

During licensing of St. Lucie Unit 1, a problem was identified at Palisades and several other Combustion Engineering reactors, including St. Lucie Unit 1, concerning the core barrel hold-down ring design. NRC addressed this problem in Section 3.9.1 of the St. Lucie Unit 1 Safety Evaluation Report (SER) dated November 8, 1974, and stated in the SER, "A monitoring program will be required until either a modification has been made to the internals or data indicates the program may be discontinued." The St. Lucie Unit 1 core barrel hold-down ring was redesigned to provide additional force to hold the core barrel in place, and in Supplement 1 to the SER, NRC stated that the redesigned ring was acceptable and that the issue was resolved with incorporation of a surveillance program to monitor core barrel movement. This NRC position is reflected in the Bases for the Core Barrel Movement Technical Specification in the statement, "A modification to the required monitoring program may be justified by an analysis of the data obtained and by an examination of the affected parts during the plant shutdown at the end of the first fuel cycle."

Discussion

The St. Lucie Unit 1 Technical Specification for Core Barrel Movement was required by NRC as described above.

The purpose of the Technical Specifications was to verify the effectiveness of the redesigned core barrel hold-down ring by determining the core barrel movement baseline and by monitoring core barrel movement against the baseline. Reporting requirements were also included as part of the core barrel movement Technical Specifications. By letter dated April 22, 1977 (L-77-122), FPL submitted to NRC the Core Barrel Movement Baseline Report as required by Technical Specification 4.4.11.1. The baseline was established by monitoring core support barrel motion at nominal power levels of 20, 50, 80, and 100 percent of rated thermal power during the reactor startup test program. As stated in the report, the core support barrel is moving less than ± 8.8 mils amplitude motion (99.7 percent confidence level) at the snubber gap level.

The baseline monitoring results provided sufficient verification of the effectiveness of the redesigned core barrel hold-down ring, in that Palisades had experienced approximately 300 mils amplitude motion as determined from the measured wear of the snubber blocks. However, St. Lucie Unit 1 has continued monitoring core barrel movement in accordance with the Technical Specifications. Results of the monitoring program have been included with the Annual Operating Reports, beginning with the 1977 report. Based on a review of the results presented in these nine reports, it can be seen that the core barrel motion has been as expected. Furthermore, upon identification of the thermal shield problem in Spring 1983, the core barrel was removed, inspected and, where damaged, repaired. During the post repair inspection, all six snubber blocks were examined and there were no indications of excessive core barrel movement.

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Conclusions

The redesigned core barrel hold-down ring has eliminated the possibility of excessive core barrel movement such as that which occurred at Palisades. This has been verified by more than nine years of core barrel movement monitoring and by physical inspection of the core barrel snubber blocks.

FPL believes that the purpose of the Technical Specification has been satisfied and that an adequate basis has been provided to justify deletion of the Technical Specification without endangering the health and safety of the public.

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ATTACHMENT 3

DETERMINATION OF NO SIGNIFICANT HAZARDS CONSIDERATIONS

The standards used to arrive at a determination that a request for amendment involves no significant hazards consideration are included in the Commission's regulations, 10 CFR 50.92, which states that no significant hazards considerations are involved if the operation of the facility in accordance with the proposed 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. Each standard is discussed as follows:

- (1) Operation of the facility in accordance with the proposed amendment would not involve a significant increase in the probability or consequences of an accident previously evaluated.

The purpose of the Core Barrel Movement Technical Specification was to verify the effectiveness of the redesigned core barrel hold-down ring by determining the core barrel movement baseline and by monitoring core barrel movement against the baseline. The baseline was determined, and monitoring core barrel movement has been performed for over nine years of plant operation. The results have shown that excessive core barrel movement is not possible with the redesigned core barrel hold-down ring. Because core barrel movement monitoring has been shown to be no longer necessary, and because core barrel movement is not considered in the accident analyses, operation of St. Lucie Unit 1 without a requirement for core barrel movement monitoring will not involve an increase in the probability or consequences of an accident previously evaluated.

- (2) Operation of the facility in accordance with the proposed amendment would not create the possibility of a new or different kind of accident from any accident previously evaluated.

The proposed amendment would only delete the requirement for core barrel movement monitoring, and would not alter any of the assumptions or methodologies used in the safety analyses. Furthermore, there is no change to the operation of the plant so that a new or different kind of accident is not possible as a result of this change.

- (3) Operation of the facility in accordance with the proposed amendment would not involve a significant reduction in a margin of safety.

The Core Barrel Movement Technical Specification does not establish any margins of safety, and therefore, deletion of the requirement for monitoring core barrel movement will not result in a reduction in a margin of safety.

THE HISTORY OF THE UNITED STATES OF AMERICA

The first part of the book deals with the early history of the United States, from the time of the first European settlers to the American Revolution. It covers the discovery of the New World, the establishment of the first colonies, and the struggle for independence.

The second part of the book deals with the period from the American Revolution to the Civil War. It covers the growth of the young nation, the expansion of territory, and the struggle over slavery.

The third part of the book deals with the period from the Civil War to the present. It covers the Reconstruction era, the Gilded Age, the Progressive Era, and the modern era. It discusses the role of the federal government, the rise of the industrial revolution, and the challenges of the 20th century.

The fourth part of the book deals with the period from the 1940s to the present. It covers the Cold War, the Vietnam War, and the social movements of the 1960s and 1970s.

The fifth part of the book deals with the period from the 1980s to the present. It covers the Reagan Revolution, the end of the Cold War, and the challenges of the 21st century.

The sixth part of the book deals with the period from the 1990s to the present. It covers the Clinton era, the 9/11 attacks, and the current political climate.

The seventh part of the book deals with the period from the 2000s to the present. It covers the Bush era, the 2008 financial crisis, and the current political climate.

Based on the above, we have determined that the amendment request does not (1) involve a significant increase in the probability or consequences of an accident previously evaluated, (2) create the probability of a new or different kind of accident from any accident previously evaluated, or (3) involve a significant reduction in a margin of safety. Furthermore, the proposed amendment is similar to Example (iv) of amendments that are considered not likely to involve significant hazards considerations, identified in the staff procedure for determination of no significant hazards, in that the proposed amendment would constitute relief granted upon demonstration of acceptable operation from an operating restriction that was imposed because acceptable operation was not yet demonstrated. Therefore, the proposed amendment involves no significant hazards consideration.

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