



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
SUPPORTING AMENDMENT NO. 38 TO FACILITY OPERATING LICENSE NO. DPR-72
CRYSTAL RIVER UNIT NO. 3 NUCLEAR GENERATING PLANT
FLORIDA POWER CORPORATION, ET AL.
DOCKET NO. 50-302

Introduction

By letters dated September 15 and December 31, 1980, the Florida Power Corporation proposed changes to the Technical Specifications (TSs) appended to Facility Operating License No. DPR-72 for the Crystal River Unit No. 3 Nuclear Generating Plant. The changes involve the incorporation of certain of the TMI-2 Lessons Learned Category "A" requirements. The licensee's request is in response to the NRC staff's letter dated July 2, 1980.

Background Information

By our letter dated September 13, 1979, we issued to all operating nuclear power plants requirements established as a result of our review of the TMI-2 accident. Certain of these requirements, designated Lessons Learned Category "A" requirements, were to have been completed by the licensee prior to any operation subsequent to January 1, 1980. Our evaluation of the licensee's compliance with these Category "A" items was attached to our letter to the licensee dated May 5, 1980.

In order to provide reasonable assurance that operating reactor facilities are maintained within the limits determined acceptable following the implementation of the TMI-2 Lessons Learned Category "A" items, we requested that licensees amend their TSs to incorporate additional Limiting Conditions of Operation and Surveillance Requirements. This request was transmitted to all licensees on July 2, 1980. Included therein were model specifications that we had determined to be acceptable. The issues identified by the NRC staff and the licensee's response are discussed in the Evaluation below.

Evaluation

Emergency Power Supply Requirements

The pressurizer water level indicators, pressurizer relief and block valves, and pressurizer heaters are important in a post-accident situation. Adequate emergency power supplies add assurance of post-accident functioning of these components. The licensee has the requisite emergency power supplies and TSs for the pressurizer heaters. The TSs provide appropriate surveillance

and actions in the event of component inoperability and are thus acceptable. TSs for emergency power supplies for the water level indicators and pressurizer relief and block valves were not included in the licensee's submittal.

We will consider the lack of TSs for these other emergency power supplies in our review of the licensee's response to our requirements of NUREG-0737 (TMI Action Plan Requirements).

Direct Indication of Valve Position

The licensee has provided a direct indication of power-operated relief valve (PORV) and safety valve position in the control room. These indications are a diagnostic aid for the plant operator and provide no automatic action. The licensee has provided TSs with a 31-day channel check and an 18-month channel calibration requirement; thus, the TSs are acceptable and they meet our July 2, 1980 model TS criteria.

Instrumentation for Inadequate Core Cooling

The licensee has installed a Subcooling Margin Monitor system to detect the effects of inadequate core cooling. These subcooling meters receive and process data from existing plant instrumentation. We previously reviewed this system in our Safety Evaluation dated May 5, 1980. The licensee submitted TSs with a 31-day channel check and an 18-month channel calibration requirement and actions to be taken in the event of component inoperability. We conclude the TSs are acceptable as they meet our July 2, 1980 model TS criteria.

Diverse Containment Isolation

The licensee has modified the containment isolation system so that diverse parameters will be sensed to ensure automatic isolation of non-essential systems under postulated accident conditions. These parameters are High Pressure Injection and Reactor Building Pressure. We have reviewed this system in our Lessons Learned Category "A" Safety Evaluation dated May 5, 1980. The modification is such that it does not result in the automatic loss of containment isolation after the containment isolation signal is reset. Reopening of containment isolation would require deliberate operator action. The TSs submitted by the licensee list each affected containment isolation valve and provide for the appropriate surveillance and actions in the event of component inoperability; therefore, we conclude that the TSs are acceptable.

Auto Initiation of Auxiliary Feedwater Systems

The licensee has provided for the automatic initiation of auxiliary (emergency) feedwater flow on loss of normal feedwater flow. The auto-initiation signals used by the licensee are Main Feedwater Pump Control Oil Low Press and Steam Generator Low-Low Signal. We have previously reviewed the design and installation of this system as part of our Lessons Learned Category "A" program. The design retains the capability of manual actuation from the control room even in the event of failure

of the auto-initiating circuitry. The TSs submitted by the licensee list the appropriate components and provide for proper test frequency. The TSs contain appropriate actions in the event of component inoperability; therefore, we conclude that the TSs are acceptable.

Auxiliary (Emergency) Feedwater Flow Indication

The licensee has installed auxiliary (emergency) feedwater flow indication that meets our vital power requirements. We reviewed this system in our Safety Evaluation dated May 5, 1980. The licensee has proposed a TS with 31-day channel check and 18-month channel calibration requirements. We find this TS acceptable as it meets the criteria of our July 2, 1980 model TS criteria.

Shift Technical Advisor (STA)

Our request indicated that the TSs related to minimum shift manning should be revised to reflect the augmentation of an STA. The licensee's application would add one STA to each shift to perform the function of accident assessment. The individual performing this function will have at least a bachelor's degree or equivalent in a scientific or engineering discipline with special training in plant design, and response and analysis of the plant for transients and accidents. Based on our review, we find the licensee's submittal to satisfy our requirements and is acceptable.

Integrity of Systems Outside Containment

Our letter dated July 2, 1980, indicated that the license should be amended by adding a license condition related to a Systems Integrity Measurements Program. Such a condition would require the licensee to effect an appropriate program to eliminate or prevent the release of significant amounts of radioactivity to the environment via leakage from engineered safety systems and auxiliary systems, which are located outside reactor containment.

By letter dated September 15, 1980, the licensee stated that a Systems Integrity Measurements Program had been developed but disagreed that a condition to the license should be established. By letter dated December 31, 1980, the licensee proposed TSs which would establish this requirement. We have determined that the proposed TSs provide adequate requirements for a Systems Integrity Program.

Iodine Monitoring

Our letter dated July 2, 1980, indicated that the license should be amended by adding a license condition related to iodine monitoring. Such a condition would require the licensee to effect a program which would ensure the capability to determine the airborne iodine concentration in areas requiring personnel access under accident conditions.

The licensee also disagreed that the above license condition should be established although they had established an Iodine Monitoring program.

By letter dated December 31, 1980, however, the licensee proposed this requirement as a TS. We have determined that the proposed TS provides adequate Iodine Monitoring requirements.

Environmental Consideration

We have determined that the amendment does not authorize a change in effluent types or total amounts nor an increase in power level and will not result in any significant environmental impact. Having made this determination, we have further concluded that the amendment involves an action which is insignificant from the standpoint of environmental impact and, pursuant to 10 CFR §51.5(d)(4), that an environmental impact statement, or negative declaration and environmental impact appraisal need not be prepared in connection with the issuance of the amendment.

Conclusion

We have concluded, based on the considerations discussed above, that: (1) because that amendment does not involve a significant increase in the probability or consequences of accidents previously considered and does not involve a significant decrease in a safety margin, the amendment does not involve a significant hazards consideration, (2) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (3) 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.

Date: April 17, 1981