



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 26 TO FACILITY OPERATING LICENSE NO. DPR-64
POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT NUCLEAR GENERATING UNIT NO. 3
DOCKET NO. 50-286

Introduction

By letter dated April 26, 1979, Power Authority of the State of New York (the licensee) requested an amendment to Facility Operating License No. DPR-64 for the Indian Point Nuclear Generating Unit No. 3. The proposed amendment would change the Technical Specifications to require actuation of safety injection based on 2 out of 3 channels of low pressurizer pressure. Until this change has been accomplished, it is understood that the low pressurizer level trips in the existing safety injection logic would remain tripped as provided for in IE Bulletin 79-06A (Item 3) and 79-06A, Revision 1.

As discussed with you, it is further understood and acceptable for the pressurizer level bistables to be returned to their normal position while this modification is underway. Further, it is understood that the changes will be made one train at a time, with each train tested before being placed into service.

Discussion

As a result of our ongoing review of the events associated with the March 28 accident at Three Mile Island Unit 2, the NRC Office of Inspection and Enforcement issued a number of IE Bulletins describing actions to be taken by licensees. IE Bulletin 79-06 (April 11, 1979) called for licensees with Westinghouse PWR's to instruct operators to manually initiate safety injection when the pressure indication reaches the actuation setpoint whether or not the level indication has dropped to the actuation setpoint. IE Bulletin 79-06A (April 14, 1979) further called for these licensees to trip the low pressurizer level bistables such that, when the pressurizer pressure reaches the low setpoint safety injection would be initiated regardless of the pressurizer level. This action was completed on April 14, 1979.

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IE Bulletin 79-06A, Revision 1 (April 18, 1979) modified the action called for in 79-06A by allowing pressurizer level bistables to be returned to their normal (untripped) operating positions during the pressurizer pressure channel functional surveillance tests.

The effect of tripping the pressurizer low level bistables which are normally coincident with the pressurizer low pressure bistables, has the effect of reducing this safety injection actuation logic to a 1 out of 3 logic. A single instrument failure of 1 of the 3 low pressure bistable channels could therefore result in an unwanted safety injection. To prevent this, the licensee proposed in an April 26, 1979 letter, a design modification which would align the existing pressurizer low pressure bistables in a 2 out of 3 logic

Evaluation

The proposed modification to the safety injection actuation system entails removing the pressurizer level signal from each of the pressurizer level/pressure channel trip and converting the system to a two-out-of-three pressurizer low pressure trip. The instrumentation logic takes pressurizer pressure signals from three pressure transmitters and initiates a safety injection actuation whenever two of the three signals reach the low pressure setpoint of 1700 psig. These modifications will satisfy the requirements of IEEE 279-1971, and other standards of installation required during the plant construction stage. We find these modifications acceptable.

We have reviewed the instrumentation and controls aspect of the proposed change in accordance with IEEE-279 and other applicable standards and Reg. Guides. The modification eliminates pressurizer level as a required initiating signal to actuate ECCS. The licensee proposes to use a 2-out-of-3 logic on low pressurizer pressure alone. Separation of trains will be maintained, testability will be maintained, and verification of proper actuation of the first train can be performed prior to modification of the second train.

We have reviewed the instrumentation power sources and determined there are four 120V instrument buses. Three of the buses (31, 32 and 33) are supplied from inverters which in turn are energized from three independent battery banks for the plant. The fourth bus (34) is supplied by a constant voltage transformer connected to 480 volt (emergency power) motor control center 36B. Alternate power to the four buses can be supplied from the lighting switchgear. The three pressurizer pressure transmitters channels are energized from buses 31, 32 and 34; consequently, a single failure will fail only one instrument channel. The licensee has committed to install a fourth battery and inverter as an additional source of instrument power during the next refueling outage (fall 1979), pending the receipt on site of the necessary materials, but to be installed not later than 1981 refueling outage.

The proposed Technical Specifications change Section 3.5 to specify automatic safety injection actuation on a two-out-of-three pressurizer low pressure of 1700 psig. We find the changes to the Technical Specifications to be acceptable.

Based on our review of the licensee's submittal, we conclude that the modifications to the safety injection actuation system logic satisfy the requirements of IEEE 279-1971 and that the associated Technical Specifications are correct; and therefore, are acceptable.

We also conclude that the proposed change will be in accordance with the above standards and guides, and that none of the transient and accident analyses are adversely affected by the change. The only effect may be a sooner SI actuation. Therefore, we find the proposed change to be acceptable.

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 these amendments.

Conclusion

We have concluded, based on the considerations discussed above, that: (1) because the 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: May 31, 1979

UNITED STATES NUCLEAR REGULATORY COMMISSIONDOCKET NO. 50-286POWER AUTHORITY OF THE STATE OF NEW YORKNOTICE OF ISSUANCE OF AMENDMENT TO FACILITY
OPERATING LICENSE

The U. S. Nuclear Regulatory Commission (the Commission) has issued Amendment No.26 to Facility Operating License No. DPR-64 issued to the Power Authority of the State of New York (the licensee), which revised Technical Specifications for operation of the Indian Point Nuclear Generating Unit No. 3 (the facility) located in Buchanan, Westchester County, New York. The amendment is effective as of the date of issuance.

The amendment revises the Technical Specifications to require actuation of safety injection based on 2 out of 3 channels of low pressurizer pressure.

The application for amendment complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations. The Commission has made appropriate findings as required by the Act and the Commission's rules and regulations in 10 CFR Chapter I, which are set forth in the license amendments. Prior public notice of this amendment was not required since the amendment does not involve a significant hazards consideration.

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The Commission has determined that the issuance of this amendment will not result in any significant environmental impact and that pursuant to 10 CFR §51.5(d)(4), an environmental impact statement or negative declaration and environmental impact appraisal need not be prepared in connection with issuance of this amendment.

For further details with respect to this action, see (1) the application for amendment dated April 26, 1979, (2) Amendment No. 26 to License No. DPR-64, and (3) the Commission's related Safety Evaluation. All of these items are available for public inspection at the Commission's Public Document Room, 1717 H Street, NW, Washington, D. C. and at the White Plains Public Library, 100 Martine Avenue, White Plains, New York. A single copy of items (2) and (3) may be obtained upon request addressed to the U. S. Nuclear Regulatory Commission, Washington, D. C. 20555, Attention: Director, Division of Operating Reactors.

Dated at Bethesda, Maryland, this 31st day of May, 1979.

FOR THE NUCLEAR REGULATORY COMMISSION



A. Schwencer, Chief
Operating Reactors Branch #1
Division of Operating Reactors

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