



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555
November 7, 1986

MEMORANDUM FOR: Sholly Coordinator
Office of Nuclear Reactor Regulation

FROM: George W. Knighton, Director
PWR Project Directorate No. 7
Division of PWR Licensing-B

SUBJECT: REQUEST FOR PUBLICATION IN BI-WEEKLY FR NOTICE - NOTICE OF
CONSIDERATION OF ISSUANCE OF AMENDMENT TO FACILITY
OPERATING LICENSE AND PROPOSED NO SIGNIFICANT HAZARDS
CONSIDERATION DETERMINATION AND OPPORTUNITY FOR HEARING

Louisiana Power and Light Company, Docket No. 50-382, Waterford Steam Electric
Station, Unit 3, St. Charles Parish, Louisiana.

Date of Amendment Request: August 20, 1986, as supplemented by two letters
dated October 6, 1986

Description of Amendment Request: The proposed changes would revise Technical
Specification 3.1.2.2, "Boration Systems, Flow Paths - Operating", ACTION
statement "a" to this specification and the associated Surveillance Require-
ment 4.1.2.2. The proposed changes would also reference a revised Technical
Specification Figure 3.1-1 which shows the minimum Boric Acid Makeup Tank
(BAMT) water volumes as a function of BAMT concentration and Refueling Water
Storage Pool (RWSP) concentration. The reason for these changes is to delete
the requirement for a heat tracing circuit in the BAMTs and associated flow
paths by reducing the maximum boron concentration in the tanks to less than
or equal to 3.5 weight percent.

Reducing the boron concentration in the BAMTs requires that they maintain
a higher water volume in order to meet the safe shutdown requirements of Branch
Technical Position RSB 5-1, "Design Requirements of the Residual Heat Removal
System." The volume of borated water that is required from these tanks is

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shown in the revision to Figure 3.1-1. During a natural circulation cooldown with no letdown available, this figure shows the minimum volume of borated water necessary to maintain the required shutdown margin during the initial stages of plant cooldown and depressurization. Once the volume of water has been depleted, the RWSP is used to supply borated water to the RCS. This provides sufficient boron to meet the shutdown margin requirements for the remainder of the cooldown. Thus, both the BAMT(s) and the RWSP are required to maintain the shutdown margin requirements to Technical Specifications 3.1.1.1 and/or 3.1.1.2 during the natural circulation cooldown.

Previously, this specification has required at least one of the BAMTs to meet the requirements of Figure 3.1-1. The proposed change will add the flexibility of meeting the Limiting Condition for Operation (LCO) by combining the contents of both BAMTs. This option was added because the proposed revision to Figure 3.1-1 allows the boron concentration in the BAMTs to go as low as 2.25 weight percent. In this case the volume requirement of approximately 14,000 gallons cannot be met with a single tank. However, if the combined contents of both tanks are used to comply with the LCO, it must be shown that both boric acid makeup pumps and both gravity feed valves are OPERABLE. This ensures that both BAMTs have two independent flow paths for injecting their contents into the RCS.

The proposed change to ACTION statement "a" of this specification will simply refer to the actual shutdown margin Specification (either 3.1.1.1 or 3.1.1.2) instead of requiring the core to be at least 2% subcritical at an RCS temperature of 200°F.

Basis for Proposed No Significant Hazards Consideration Determination: The

NRC staff proposes to determine that these changes do not involve a significant hazards consideration because, as required by the criteria of 10 CFR 50.92(c), 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 the margin of safety. The basis for this proposed finding is given below.

- (1) Deleting the requirement for a heat tracing circuit by reducing the boron concentration in the BMTs is accounted for by increasing the volume of boric acid solution that must be contained in the tanks and by also crediting borated water from the RWSP. During a natural circulation cooldown with no letdown available (Branch Technical Position RSB 5-1), sufficient borated water is available in the BMTs to maintain the required shutdown margin while the plant is depressurized to the point where borated water from the RWSP can be delivered to the RCS. This provides sufficient boron to ensure the shutdown margin requirements of Specification 3.1.1.1 and/or 3.1.1.2 are satisfied. Since the safe shutdown requirements of Branch Technical Position RSB 5-1 are satisfied, these changes do not significantly increase the probability or consequences of any accident previously evaluated.
- (2) The reason for requiring a heat tracing circuit was to ensure that the dissolved boric acid was in solution and hence, available for injection into the Reactor Coolant System in the event of an emergency. By lowering the maximum boric acid concentration in the BMTs to 3.5 weight percent,

chemical analyses have shown that the boron will remain in solution at temperatures above 50°F. Since requirements are in place to ensure that the BMT solution remains above 55°F when crediting this source of borated water, there is no longer a need for the heat tracing circuit. Therefore, since the proposed changes still ensure that the required boration flow paths are OPERABLE, it does not create the possibility of a new or different kind of accident from those previously evaluated.

- (3) The intent of this Technical Specification is to ensure that there are two redundant flow paths from the borated water sources to the Reactor Coolant System and that both these flow paths remain OPERABLE. Surveillance requirement 4.1.2.2 retains the requirement to verify that each valve in the flow path is in its correct position and has been amended to verify that the borated water in the BMTs is greater than 55°F whenever the Reactor Auxiliary Building air temperature is less than 55°F. Since chemical analyses have shown that a 3.5 weight percent solution of boric acid will remain in solution at temperatures above 50°F, this Specification assures that the boric acid will remain in solution and will be able to be delivered to the RCS even if a single failure is assumed. Thus, the effect of the proposed changes does not involve a significant reduction in the margin of safety.

The staff has reviewed the licensee's no significant hazards consideration determination analysis. Based on the review and the above discussion, the staff proposes to determine that the proposed changes do not involve a significant hazards consideration.

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/s/
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