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

February 13, 1987

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: January 13, 1987

Description of amendment request: Louisiana Power and Light Company (LP&L) has proposed the addition of new technical specification (No. 3.3.3.7.3) for the Broad Range Toxic Gas Detection System (BRTGDS) to satisfy Condition 2.C.4, "Broad Range Toxic Gas Detectors," of Facility Operating License No. NPF-38 and Supplement No. 6 to the Safety Evaluation Report (NUREG-0787).

Waterford 3 was allowed to operate during the first cycle without a BRTGD system due to near-term compensatory measures i.e., periodic surveys of toxic gas inventories, a hot line communication with the St. Charles Parish Emergency Operations Center, a control room operator and plant personnel training program, and procedures with respect to response to toxic gases. Although these measures were considered adequate for short-term operation, an additional level of protection will be provided by the BRTGDS for operation over the expected plant lifetime.

The proposed BRTGDS would include two redundant photoionization detectors. These detectors would monitor the atmosphere in the reactor auxiliary building outside air intake duct. Whenever the concentration of the detectable gases

exceeds a preset limit, these detectors will each induce an electric current in the associated circuit through photoionization, thus generating a signal. This signal automatically switches the control room air conditioning system to the isolation mode of operation.

The Waterford Steam Electric Station, Unit 3 control room operators are presently protected from accidental releases of chlorine and ammonia by separate chlorine and ammonia detectors which monitor the atmosphere in the outside air intake duct. The detectors sound an alarm and isolate the control room if the concentration of either of these gases exceeds its respective preset limit.

In addition, LP&L is a participant in the St. Charles Parish emergency hot line, which can be expected to alert the control room within five minutes of being notified of any serious release of hazardous chemicals in the area, thus allowing the operators to take immediate protective action. The BRTGDS will thus supplement the present defense-in-depth toxic chemical protective measures and provide additional toxic chemical protection.

This new technical specification will require two independent broad range gas detection systems to be operable with their alarm/trip setpoints adjusted to actuate at the lowest achievable IDLH (Immediately Dangerous to Life and Health) gas concentration level of detectable toxic gases. They are also required to provide reliable operation. This proposed technical specification is to be applicable in all modes of operation. Should the above requirements not be met, one of the following actions will be required. When only one broad range gas detection system is operable, the inoperable system must be restored to operable status within seven days, or within the next six hours

the plant must initiate and maintain operation of the control room ventilation system in the recirculation mode of operation. When both systems are inoperable, the control room ventilation system must be initiated and maintained in the recirculation mode of operation within one hour. The provisions of Specification 3.0.4 (Entry into an Operational Mode) are not applicable to this proposed technical specification.

The proposed surveillance requirements for this technical specification demand that each broad range gas detection system be demonstrated operable by a performance of a channel check at least once every twelve hours, a channel functional test at least once every 31 days, and a channel calibration at least once every seven days.

LP&L has proposed that the Bases (3/4.3.3.7) for this section be amended to include the BRTGDS with the other chemical detection systems. It would state that the operability of the BRTGDS shall ensure that sufficient capability is available to promptly detect and initiate protective action in the event of an accidental chemical release. The amended Bases would also provide further definition of the system and indicate that the setpoint is based on testing and operating experience as a result of the Waterford 3 area chemical atmosphere profile. Due to possible environmental conditions, this setpoint is subject to change and therefore would be established and controlled by procedure.

Basis for Proposed No Significant Hazards Considerations Determination:

The NRC staff proposes to determine that the proposed change does 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) The proposed addition has no effect on the assumptions contained in the safety analyses. The technical specifications which preserve the safety analysis assumptions are likewise unaffected by the proposed change. The Waterford 3 program for the protection of control room operators is comprised of various in-depth defensive measures. The control room operators are protected from accidental releases of chlorine and ammonia by dedicated chlorine and ammonia detectors, which monitor the atmosphere in the outside air intake duct and will sound an alarm and isolate the control room if the concentration of either of these gases exceeds its respective preset limit. In addition, LP&L is a participant in the St. Charles Parish emergency hot line, which can be expected to alert the control room within five minutes of being notified of any serious release of hazardous chemicals in the area, thus allowing the operators to take immediate protective action. The proposed BRTGDS will supplement the present defense-in-depth toxic chemical protective measures and will therefore not increase the probability or consequences of any accident previously analyzed.

(2) The proposed change will not physically affect existing chlorine and

ammonia systems. Therefore, the proposed change will not create the possibility of a new or different kind of accident.

(3) The Waterford 3 safety limits and margins are defined and maintained by the Technical Specifications. This proposed technical specification is an additional limitation on plant operation and does not affect the safety limits or margins contained in the other Waterford 3 technical specifications. The proposed change will therefore not involve any reduction in a safety margin.

The Commission has provided guidance concerning the application of standards for determining whether a significant hazards consideration exists by providing certain examples (51 CFR 7751) of amendments that are considered not likely to involve significant hazards considerations. Example (ii) relates to a change that constitutes an additional limitation, restriction, or control not presently included in the technical specifications.

In this case, the proposed change in similar to Example (ii) in that the BRTGDS has not previously had a technical specification associated with it.

As the changes requested by the licensee's January 13, 1987 submittal fit Example (ii) as well as satisfy the criteria of 50.92, the staff proposes to determine that the proposed changes do not involve a significant hazards consideration.

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Attorney for licensee: Bruce W. Churchill, Esq., Shaw, Pittman, Potts and Trowbridge, 2300 N St., N.W. Washington, D.C. 20037

NRC Project Director: George W. Knighton

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

Attorney for licensee: Bruce W. Churchill, Esq., Shaw, Pittman, Potts and Trowbridge, 2300 N St., N.W. Washington, D.C. 20037

NRC Project Director: George W. Knighton

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George W. Knighton, Director
PWR Project Directorate No. 7
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