

January 28, 1983



SECY-83-41

## ADJUDICATORY ISSUE

(Commission Meeting)

FOR: The Commissioners

FROM: *John E. Zerbe*  
John E. Zerbe, Director  
Office of Policy Evaluation

SUBJECT: NOVEMBER 3, 1982 ATOMIC SAFETY AND LICENSING BOARD  
PARTIAL INITIAL DECISION RELATED TO FULL POWER OPERATION  
OF WATERFORD UNIT 3

PURPOSE: To provide OPE's immediate effectiveness analysis of the  
Waterford ASLB Partial Initial Decision

### DISCUSSION:

The Licensing Board for the Waterford Steam Electric Station Unit 3 issued on November 3, 1982 the first of two Partial Initial Decisions (PID) related to full-power operation. The Waterford facility is located on the west bank of the Mississippi River approximately 24 miles west of New Orleans, Louisiana, and utilizes a nuclear steam supply system designed by Combustion Engineering (CE). The applicant's present expected date of plant completion is May 12, 1983.

In the hearing the Board addressed Joint intervenors' contentions on the potential synergistic effects of low-level radiation and chemical carcinogens and on emergency planning (EP) issues. The Board was unable to resolve, because of an incomplete hearing record, one EP issue involving the emergency planning brochure. The Board has scheduled a further hearing on the brochure in February and will issue a second PID (now expected in mid-April 1983). On the contested issues that were addressed in the first PID, the Licensing Board found in favor of the applicant and, pending favorable resolution of the remaining EP issue and subject to a number of conditions, authorized issuance of an operating license for Waterford.

In its PID the Licensing Board also addressed as an uncontested issue the unresolved safety issue on shutdown decay heat removal and concluded they wanted to "bring this issue to the attention of the Commission and urge that an in-depth assessment of the reliability of the Waterford Unit 3 shutdown decay heat removal system be made by an independent laboratory ..."

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Enclosure 1 provides a summary of the decision. Based on our review and analysis

We provide below our comments

#### CONTESTED ISSUES

##### Synergism

At issue was whether, as a result of synergistic actions between radiation from Waterford-3 and chemical carcinogens from nearby industries, the total health effects would exceed the sum of the health effects from each agent (i.e., radiation or chemicals) acting independently. (The staff and applicant had not previously evaluated this effect.)

OPE believes

### Emergency Planning

Joint Intervenors' contentions focused on two aspects of the offsite emergency planning. One of the Joint Intervenors' major contentions on the EP was that the State plan did not include provisions for predistribution of potassium iodide (KI) to the general population. Based on the staff's and applicant's testimony, the Board found that the State's decision not to predistribute KI was not inconsistent with NRC and FEMA guidance (i.e., the decision to dispense KI is the prerogative of the state).

The second area of contention concerned alleged inadequacies in certain aspects of planning for evacuation of individuals within the 10-mile plume exposure EPZ, namely: notification to residents of evacuation procedures; the roads and highways necessary for evacuation; the evacuation warning system; the command decision structure; the content of the evacuation drills; and evacuation of people with special needs (e.g., the sick or hospitalized). Although the Board found that the provisions for evacuation were adequate and met the Commission's regulations, the Board did impose several conditions on OL issuance related to arrangements with neighboring parishes (counties) on use of emergency vehicles, evacuation of prisoners, and the content of emergency public notification messages. These conditions are listed in Enclosure 1.

By the conclusion of the hearing the emergency planning brochure had not yet been drafted and in this respect the Board determined the record to be inadequate. The Board reopened the record and, at the Board's direction, the applicant submitted his draft emergency planning brochure and the staff, FEMA and Joint Intervenors submitted comments to it. Joint Intervenors, in addition, requested that a further hearing be held on the content of the brochure. The applicant agreed that a hearing would be the most expedient method for resolving this issue, but asked that it be permitted to submit a revised brochure to address the other parties' comments. Subsequently, the Board ordered a further hearing (scheduled for February 8-11, 1983) and announced that the adequacy of the revised brochure will be the subject of a second PID (expected mid-April 1983).

OPE believes that

## UNRESOLVED GENERIC SAFETY ISSUE

Shutdown Decay Heat Removal

The Board was concerned whether Waterford can be operated safely prior to a generic resolution of the need for an alternative means of shutdown decay heat removal. The Waterford reactor coolant system design does not include power-operated relief valves (PORVs) on the pressurizer. In addition, the high-pressure coolant-injection system (HPIS) cannot inject coolant at the pressure setpoint (2500 psi) of the pressurizer safety valves. Hence, an alternative high-pressure shutdown heat removal capability known as "feed and bleed" is not available at Waterford.

Earlier the Board in its March 18, 1982 Memorandum and Order had raised sua sponte the issue of shutdown decay heat removal. In a subsequent Memorandum and Order of April 27, 1982, the Board explained its reasons for withdrawing this sua sponte consideration, stating that it was granting the Applicant's Motion for Reconsideration based on the fact that sua sponte authority in this instance is precluded by 10 CFR §2.760a. Although the Board withdrew its sua sponte question, the Board stated in its April 27 Memorandum and Order:

"We do not agree ... that feed-and-bleed back-up for the EFWS is not a serious matter. We believe that it is and that the matter should be pursued. Moreover, we are now convinced that the issue should and will be explored on a generic basis."

Notwithstanding the April 27 Memorandum and Order, the Board addressed in its PID this shutdown decay heat removal issue within the scope of its review of 13 unresolved generic safety issues in compliance with the Appeal Board policy established in the decision in Virginia Electric and Power Company (North Anna Nuclear Power Station, Units 1 and 2), ALAB-491, 8 NRC 245 (1978). The Board stated in the PID its dissatisfaction with the Staff's treatment of this issue and urged "an in-depth assessment of the Waterford 3 shutdown decay heat removal system ... by an independent laboratory, such as Sandia National Laboratory."

The staff, as part of its plan to resolve generic issue A-45, is conducting a detailed technical study at Sandia National Laboratory on shutdown decay heat removal. This study will include a representative sample of plant-specific shutdown decay heat removal system evaluations and will provide recommendations to determine the adequacy of existing shutdown decay heat removal system requirements and the desirability of, and possible design requirements for, alternative shutdown decay heat removal system(s). One specific subtask of this study is to determine, using probabilistic and deterministic methods, the reliability of existing shutdown decay heat removal systems.

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SUMMARY

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Enclosures:  
As stated

This paper is tentatively scheduled for discussion at a Closed Meeting during the Week of February 28, 1983. Please refer to the appropriate Weekly Commission Schedule, when published, for a specific date and time.

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