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

May 8, 1985

Docket No. 50-219
LS05-85-05-007

Mr. P. B. Fiedler
Vice President and Director
Oyster Creek Nuclear Generating Station
Post Office Box 388
Forked River, New Jersey 08731

Dear Mr. Fiedler:

SUBJECT: NUREG-0737, ITEM II.K.3.21, RESTART OF CORE SPRAY AND LOW PRESSURE COOLANT INJECTION SYSTEMS LOW LEVEL INITIATION

Re: Oyster Creek Nuclear Generating Station

We have completed our review of your letter dated April 3, 1985, concerning the NUREG-0737 Item II.K.3.21. In that letter, you stated that the proposed modification to the core spray system (CSS) described in your letter dated March 28, 1983, to allow the operator to throttle the CSS isolation valves and have better control over the reactor vessel water level during an emergency was not done and that this proposed modification was not required by NUREG-0737 Item II.K.3.21. You stated that, as a result of NRC IE Information Notice No. 83-55 dated August 22, 1983, concerning the throttling of valves outside their design range and of engineering evaluations, it was decided to delete this modification from the modifications to be made to the CSS. You stated that the other modifications proposed for the CSS and approved by the staff were completed before restart from your Cycle 10 refueling outage.

Your letter dated March 28, 1983, described several proposed modifications to the CSS to meet the NRC requirements for NUREG-0737 Item II.K.3.21. In this letter, you included the above proposed modification to allow operators to throttle the CSS isolation valves. This proposed modification was discussed in the staff's Safety Evaluation (SE) dated May 27, 1983, which accepted the proposed conceptual designs of the CSS modifications described in your letter March 28, 1983, and concluded that they satisfied the requirements of NUREG-0737 Item II.K.3.21.

The proposed modification to throttle the isolation valves was not a requirement of NUREG-0737 Item II.K.3.21. This NUREG-0737 item for Oyster Creek addressed the concern that the CSS flow may be stopped by the operator and that this system will not restart automatically on loss of water level if an initiation signal is still present. The requirement was that

the CSS should be modified so it will restart, if required, to assure adequate core cooling. Therefore, because this proposed modification does not affect the restart of the CSS, the deletion of this proposed modification does not change the conclusion of the staff's SE dated May 27, 1983, that Oyster Creek has met the requirements of NUREG-0737 Item II.K.3.21. Enclosed is a copy of the staff's SE dated May 27, 1983.

Sincerely,

Original signed by:

John A. Zwolinski, Chief
Operating Reactors Branch No. 5
Division of Licensing

Enclosure:
Safety Evaluation dated
May 27, 1983

cc w/enclosure:
See next page

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ENCLOSURE

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

May 27, 1983

Docket No. 50-219
LS05-83-05-062

Mr. P. B. Fiedler
Vice President and Director
Oyster Creek Nuclear Generating Station
Post Office Box 388
Forked River, New Jersey 08731

Dear Mr. Fiedler:

SUBJECT: NUREG-0737, ITEM II.K.3.21, CORE SPRAY AND LOW PRESSURE COOLANT INJECTION SYSTEMS LOW LEVEL INITIATION

Oyster Creek Nuclear Generating Station

We have completed our review of your response dated March 28, 1983 to NUREG-0737, Item II.K.3.21, Core Spray and Low Pressure Coolant Injection Systems Low Level Initiation.

Based on our evaluation of your submittal, we conclude that the proposed conceptual design of the CSS modifications satisfy the requirements of Item II.K.3.21 and is therefore acceptable.

The issuance of this letter and the enclosed Safety Evaluation completes our action on this item.

Sincerely,

Dennis M. Crutchfield

Dennis M. Crutchfield, Chief
Operating Reactors Branch #5
Division of Licensing

Enclosure:
Safety Evaluation

cc w/enclosure:
See next page

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

SAFETY EVALUATION

NUREG-0737 ITEM II.K.3.21,

"RESTART OF CORE SPRAY AND

LOW PRESSURE COOLANT INJECTION SYSTEMS,"

OYSTER CREEK NUCLEAR GENERATING STATION

DOCKET NO. 50-219

1.0 INTRODUCTION

The core-spray and low-pressure, coolant-injection (LPCI) system flow may be stopped by the operator. These systems will not restart automatically on loss of water level if an initiation signal is still present. The core spray and LPCI system logic should be modified so that these systems will restart, if required, to assure adequate core cooling. Because this design modification affects several core-cooling modes under accident conditions, a preliminary design should be submitted for staff review and approval prior to making the actual modification.

2.0 EVALUATION

In a letter dated March 28, 1983, from P. B. Fiedler to D. G. Eisenhut, General Public Utilities (the licensee) proposed modifications to the Core Spray System (CSS) at the Oyster Creek Nuclear Generating Station. The purpose of the modifications is: 1) to permit manual restart of the CSS without resetting the core spray logic; 2) to permit automatic restart (after the pumps have operated and been tripped) of the CSS; and 3) to provide the operator with throttling capability for reactor vessel water level control.

The proposed modification will not affect the CSS initial actuation logic, which is as follows: both systems will start automatically upon receipt of a high dry well pressure or low-low water level signal. When the low reactor pressure permissive is satisfied, the injection valves will open. To stop the system, a manual trip is required. The proposed modifications will incorporate additional control features as follows:

1) When the core spray system pumps start and the operator desires to trip the pumps, during an ECCS signal, he will first have to put the system into manual override state and then trip the pumps. This will require another deliberate operation for tripping the pumps.

2) Whenever the system pumps are tripped in the presence of an actuation signal, the antipumping logic of the pump breakers will be reset automatically. This will allow the operator to restart the pumps immediately after tripping them.

3) If the operator logic is in the manual override mode and the ECCS signal recurs, the core spray pumps will restart automatically.

4) The operator will be able to throttle the isolation valves to assist in reactor water level control.

3.0 CONCLUSION

The staff has reviewed the conceptual design of the CSS modifications proposed by the licensee and concludes that they satisfy the requirements of Item II.K.3.21 of NUREG-0737. The staff further concludes that the proposed action does not:

1) Involve a significant increase in the probability or consequences of an accident previously evaluated;

2) Create the possibility of an accident of a type different from any evaluated previously; or

3) Involve a significant reduction in a margin of safety.

The conceptual design proposed by the licensee is, therefore, acceptable.

4.0 ACKNOWLEDGEMENT

The following NRC employee was the principal contributor to this SE:

T. Collins

Dated: May 27, 1983