



GPU Nuclear Corporation

Post Office Box 388
Route 9 South
Forked River, New Jersey 08731-0388
609 971-4000
Writer's Direct Dial Number:

July 3, 1985

Mr. John A. Zwolinski, Chief
Operating Reactors Branch No. 5
Division of Licensing
U.S. Nuclear Regulatory Commission
Washington, D. C. 20555

Dear Mr. Zwolinski:

Subject: Oyster Creek Nuclear Generating Station
Docket No. 50-219
SEP Topic No. III-4.A, Tornado Missiles
(IPSAR Section 4.6.4 Condensate Storage Tank, Torus Water
Storage Tank, and Service Water and Emergency Service Water
Pumps)

During the integrated assessment of the subject topic, the NRC staff stated that although there are multiple sources of water supply system (e.g. Condensate Storage Tank, Torus Water Storage Tank, Service Water & Emergency Service Water pumps, etc.) on which Oyster Creek NGS can rely to accomplish safe shutdown, they are not protected from tornado missiles. It is the staff's position that redundancy is not acceptable protection for tornado missiles.

GPUN agreed to provide a protected water supply and associated components to ensure safe shutdown in the event of damage from tornado missiles and to provide procedures that specify the conditions for and use of the components.

The proposed resolution of this issue is to utilize a main Core Spray pump to supply the Isolation Condenser. This will be accomplished by connecting a hose to one of the Core Spray relief lines in one of the two Core Spray system loops and routing the hose to the Isolation Condenser. The water supply will be the suppression chamber (torus) which is located on -19'-6" elevation of the Reactor Building and is protected from tornado missiles. The Isolation Condensers normally contain a sufficient water capacity to condense Reactor steam (following shutdown from full power) for approximately 50 minutes with one condenser operating or 100 minutes with both condensers operating before makeup water is required. Somewhat longer periods are available during a tornado since Emergency Operating Procedure, "High Winds", instructs the operator to fill the Isolation Condensers to their high level alarm point upon indications of high winds or tornado warnings.

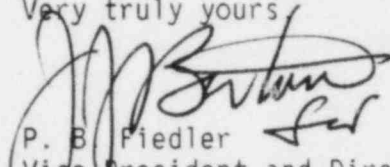
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To determine the amount of makeup water required under tornado scenario, it was assumed that only one Isolation Condenser is operable and that the loss of all normal makeup sources occurs immediately after Reactor scram, allowing approximately one hour to initiate makeup to the condenser. The supply requirement was determined to be 160 gpm. Therefore, at one hour after scram, 160 gpm will supply adequate cooling to remove the decay heat generated by the Reactor. This makeup requirement decreases over time as the decay heat level decreases. One main Core Spray pump can be operated at approximately 500 gpm, with 300 gpm recirculating through the minimum flow line and 200 gpm supplying the Isolation Condenser. It has been determined that pump operation at this flow would provide adequate head to supply makeup.

The proposed modification (i.e. installation of hose connections on the Core Spray relief line and the Isolation Condenser over flow line) will be implemented during the next operating cycle (cycle 11).

Very truly yours,


P. B. Fiedler
Vice President and Director
Oyster Creek

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cc: Administrator
Region I
U.S. Nuclear Regulatory Commission
631 Park Avenue
King of Prussia, Pa. 19406

NRC Resident Inspector
Oyster Creek Nuclear Generating Station
Forked River, N. J. 08731