



GPU Nuclear
P.O. Box 388
Forked River, New Jersey 08731
609-693-6000
Writer's Direct Dial Number:

August 20, 1982

Mr. James Lombardo, Project Manager
Operating Reactors Branch #5
Division of Licensing
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Mr. Lombardo:

Subject: Oyster Creek Nuclear Generating Station
Docket No. 50-219
License No. DPR-16
Technical Specification Change Request No. 94

This letter is being submitted in response to questions raised by Dr. Michael Masnik of the USNRC during recent telephone conversations with Mr. Mitchell Gertz of our Environmental Licensing staff concerning the subject technical specification change request.

Dr. Masnik has three questions which require additional input. They are as follows: 1) At what water height is GPUN defining unusually low intake canal water level? 2) What is the frequency of occurrence of unusually low intake canal water level? 3) What is the potential for a fishkill due to a loss of dilution pumps caused by unusually low intake canal water level?

In response to the first question, the water height that defines "Unusually Low Intake Canal Water Level" is 2.0' below mean sea level (MSL). This height was chosen since it allows for sufficient suction head to operate all pumps located at the intake structure. Intake canal water level at this height will not necessarily cause plant personnel to initiate the requested specification (2.1.4.5). Operating history of the plant indicates that all intake components can be operated at 2.0' below MSL and initiation of the proposed specification (2.1.4.5) will probably not occur unless the intake canal water level continues to fall.

The frequency of occurrence of unusually low intake canal water level is estimated at once every six weeks or less. The estimate was based on data obtained at a recording tide gauge which can only measure to a level of 1.0' below MSL. There were 10 instances over a 16 month period in which the

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canal water level was less than 1.0' below MSL. Since 1.0' below MSL is the lower limit of measurement we cannot be certain as to how many instances out of the recorded 10 low measurements were at 2.0' below MSL or lower. It should also be noted that in order for unusually low intake canal water to occur certain meteorological conditions are required. They are a lower than normal ebb tide and strong northwesterly winds of approximately 20 MPH for a period of 2-3 days.

As to the potential of fishkills, cessation of dilution pump operation has occurred many times when the ambient bay temperature was below 20°C with no resultant mortalities. The data indicate that an ambient bay temperature of 20°C or less will occur during late October through early May. Laboratory studies have indicated that delta T's approximating those that would result from the loss of one dilution pump ($\Delta T = 3-4^{\circ}\text{C}$) or two dilution pumps ($\Delta T = 6-7^{\circ}\text{C}$), do not cause significant mortality at acclimation temperatures below 20°C.

At temperatures above 20°C there were two fishkills associated with loss of dilution pumps. These fishkills occurred at 21.2°C and 28.3°C. These events resulted in relatively few mortalities, since the fish can avoid heat shock by moving to the cooler waters of Barnegat Bay. Historical temperature data indicate that the ambient bay temperature will most likely exceed 20°C from late May to early October. It is during this period that a fishkill may possibly occur due to an occurrence of unusually low intake canal water level which causes the plant to cease dilution pump operation.

Should you require any more information regarding this technical specification change request, please contact Mr. Mitchell Gertz of our Licensing & Regulatory Affairs staff at (201) 299-2186.

Very truly yours,



P. B. Fiedler
Vice President-Director
Oyster Creek

MG:dls

cc: Dr. Michael Masnik
AR 52000
U. S. Nuclear Regulatory Commission
Washington, DC 20555