

V26-C

APR 25 1974

DISTRIBUTION:
Docket File (ENVIRON)
AEC PDR
Local PDR
L Reading
EP-4 Reading
RBevan, EP-4
WRegan, EP-4
DRMuller, EP
SReed, EP-4
JFO'Leary
AGiambusso
JCook
GERtter (DR-6913)
MGroff

khughes
OCR(3)
RO(3)

Docket no. 50-219

Senator Clifford P. Case
United States Senate

Dear Senator Case:

This is in response to your communication of April 5, 1974 which enclosed a letter from Mr. Gregory Ulirsch regarding fish being killed as a result of operation of the Oyster Creek Nuclear Generating Station. Mr. Ulirsch's letter also inquired about the possibility of cooling the cooling water before discharging it back to the source.

The Oyster Creek Station draws water from Barnegat Bay for cooling and discharges it back to the Bay with a temperature rise of about 21°F when the plant is operating at full power. In the colder months, certain fish that normally tend to migrate southward are attracted by the warm water and congregate in the plant discharge canal. On occasion, with conditions as described above, a plant shutdown causing a decrease in water temperature has resulted in the death of thousands of fish, mostly Atlantic Menhaden.

Also, fish have been killed in the summer when the plant discharge dilution pump tripped off and was not restarted immediately. This allowed water in the discharge canal to become excessively warm, resulting in the death of some fish in the canal.

Our studies of these events have indicated that fish kills of the magnitude thus far experienced at Oyster Creek do not cause significant depletion of fish population or threaten the ecosystem of that area. Measures are being considered, however, to minimize the extent of such occurrences.



In answer to Mr. Ulirsch's question about cooling the water before returning it to its source, this can be accomplished by some form of close-cycle cooling system. The most commonly used such system is a cooling tower. In this case, the heated water is cascaded past a counterflow of air in a specially built tower, which might be several hundred feet high. The water loses most of its excess heat to the atmosphere before returning to its source.

B/S64

H

Such systems also have disadvantages which must be weighed against the advantages of their use. For example, they are expensive to build and operate, they consume large amounts of water by evaporation, and can contribute to fogging and icing problems in the vicinity of the plant.

The Regulatory staff is currently conducting a review to identify and evaluate the environmental effects of operation of the Oyster Creek Station, and to evaluate, on a cost-benefit basis, the alternatives, including closed-cycle cooling, that might be directed toward lessening any undesirable consequences of plant operation. The Regulatory staff's recommendation for an appropriate course of action will be reflected in the Final Environmental Statement scheduled to be issued in May, 1974.

We believe the foregoing information is responsive to Mr. Ulirsch's letter. If more information is required, we will be pleased to hear from you.

Sincerely,

Original signed by:
Roger S. Boyd ✓

A. Giambusso, Deputy Director
for Reactor Projects
Directorate of Licensing

Enclosure:
Letter from Mr. Gregory Ulirsch to
Senator Clifford P. Case

OFFICE	L:EP-4	L:EP-4	L:EP-4	L:RP	OCR
SLRNAME	RBBewick	WHRegan	DRMuller	AGiambusso	
DATE	4/18/74	4/19/74	4/23/74	4/17/74	4/17/74