

UNITED STATES
ATOMIC ENERGY COMMISSION
DIRECTORATE OF REGULATORY OPERATIONS
REGION I
970 BROAD STREET
NEWARK, NEW JERSEY 07102

RO Inquiry Report No. 50-219/73-01Q

Licensee: Jersey Central Power & Light Co.
Madison Avenue at Punch Bowl Road
Morristown, New Jersey 07960

License No.: DPR-16

Facility: Oyster Creek
Forked River, New Jersey

Title: Fish Kill from Decrease in Cooling
Water Temperature

Prepared by: K. E. Plumlee
K. E. Plumlee, Reactor Inspector

1/11/73
Date

A. Date and Manner in which was Informed:

At 4:40 p.m. on January 8, 1973 a representative of the Department of Environmental Protection of the State of New Jersey advised RO:I by telephone that a fish kill had been reported at Oyster Creek downstream from the nuclear power plant.

On January 9 and 10, 1973, RO:I received additional information from a station representative.

On January 10, 1973, RO:I representatives called a fisheries biologist for the Station of New Jersey to obtain information on the State's study of the fish kill.

B. Description of Particular Event or Circumstance:

The licensee's representative stated that their consultant had inspected the cooling water discharge canal and had reported seeing a few fish in apparent distress on December 29, 1972, a few hours after the plant shutdown.

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POOR QUALITY PAGES

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The plant remained shutdown until January 10, 1973, with approximately 460,000 gpm cooling water flow discharging into the canal. The licensee's representative stated that he personally observed a hundred or so dead fish on January 8, 1973 and that the consultant had again inspected and had reported counting, on January 9, 1973, some 900 dead fish in four lagoons, and that he found no dead fish in the main streams or bay outlets. The cause of death was stated to be the cold water environment. The licensee's representative stated that a few dead menhaden were also found on the intake screen.

The dead fish were mostly menhaden (sometimes called moss-bunkers) ranging from 2 to 10 inches in length; however, the licensee's consultant apparently had found some bay anchovies frozen into ice in a shallow area. Newspaper accounts* reported a "sheepshead" bass and five or six fish of an unidentified species among hundreds (or thousands, according to one article*) of dead menhaden.

Menhaden are reported to be unable to survive in water as cold as 39° F and normally migrate to warm water regions during cold weather.

The water temperature in the discharge canal was reported by the licensee to have declined from above 54° F when the plant operated to approximately 40° F soon after the plant shut down. A further decline occurred with colder weather commencing on January 5. Typical water temperatures reported by the licensee's representative were 43° F on the 5th, 40° F on the 6th, and 33° F with ice forming on the surface during the 7th through the 11th of January, 1973.

Sea gull activity was reported to be noticeable and consistent with the observations of dead fish, and less than during a previous fish kill (January 28, 1972).

*Enclosure - Copy of article from the Asbury Park, N. J. Evening Press dated January 9, 1973.

The licensee's representative stated that no release of chemicals or of radioactive effluents exceeding environmental or AEC guidelines had occurred. He also stated that the dilution pumps were not used during the time December 28, 1972 to January 11, 1973; that oxygen content in the water was adequate; that examination of dead fish showed scales were intact and there was no mucus on the gills; and that no evidence was found of toxic materials.

C. Action by Licensee:

The licensee is continuing studies of this matter using the services of consultants who have been studying the fish kill problem. The stated purposes of these studies is to find a long range solution to the problem. The licensee stated that the consultant was planning additional field studies at Oyster Creek. The licensee's representative stated that their consultant is preparing a report of the studies being conducted.

Fish Kill Near Nuclear Plant Is Being Probed

WARETOWN — A two-pronged investigation by biologists was to begin today to determine what caused the death of several thousand fish found dead yesterday in Oyster Creek. They were discovered either frozen in the ice or floating in the creek within a mile of the Jersey Central Power & Light Co.'s nuclear power generating plant.

The fish kill was similar to the one last January that destroyed thousands of menhaden and, as was the case last year, the nuclear plant was shut down for maintenance at the time.

Edwin Sherratt, regional director of public relations for Jersey Central Power & Light Co., said the plant has been shut down for 11 days, indicating the fish survived until the big drop in temperature over the past weekend.

Biologists from the company and the state Department of Environmental Protection were to join in the investigation of the latest fish kill.

The situation was reported by Henry Kurtz and Charles B. Mallie, marina operators along Oyster Creek, who said the dead fish were discovered yesterday morning. They also reported huge flocks of seagulls were seen in the area Sunday.

Hundreds of the dead fish were frozen in the ice in four lagoons off Bay parkway that runs parallel to the creek. Mr. Kurtz said most of those in the main stream of the creek had been eaten by the seagulls.

Mr. Kurtz said many more menhaden will float to the surface when the ice melts and that only a small percentage were frozen in the ice. He also said one sheepshead fish, a member of the bass family, and five or six of another unidentified species were also found.

The menhaden ranged in size up to 10 or 12 inches in length, about twice the size of the menhaden killed last year. He said some seagulls were so gorged on dead fish, they refused to touch several thrown to them.

Charles Amato, an engineer in the state Department of Environmental Protection, said the fish kill appears to be a repetition of last year's condition, but that he had information as to the cause.

Last year the fish kill was reported within 24 hours after the nuclear plant shut down for maintenance, but this year it was 10 days before dead fish were reported.

Mr. Sherratt said that since last year's kill, biologists from the National Marine Fishery Service of the National Oceanic and Atmospheric Administration have been studying the migratory habits of the menhaden to determine at what water temperature, menhaden leave the area.

He said the study, which began last summer, is to be completed later this month or early in February.

Mr. Sherratt said company officials are considering the possibility of closing down

the plant at the point in the fall when the fish would normally migrate so they would leave the area. Then the plant would start up after the fish left.

Mr. Mallie said menhaden normally depart from the area in late September or October, depending on the temperature.

Mr. Mallie, who said he has lived here permanently since 1957 and never saw a fish kill until after the plant began operating, said the temperature of the water in the creek is about 20 degrees higher than the water in Barnegat Bay and in nearby creeks.

Mr. Kurtz, owner of the Oyster Creek Marina, and Mr. Mallie, co-owner of the Briarwood Yacht Basin, are two of four marina owners along the creek who recently filed a damage suit against JCP&L, claiming discharge from the plant has changed the creek from a fresh-water stream to a salt-water channel and caused damage to their property and their businesses.

They claim the salt water attracts shipworms and marine borers which destroy their untreated bulkheads and pilings and damage customers' boats.

Environmentalists and residents who opposed the construction of the \$100-million plant here seven years ago, called it a danger to marine life. They believe the increased temperature of the water channeled fish and other marine life.

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These fish floating in an open patch of water, and others visible beneath the ice, are only a few of many found dead yesterday in Oyster Creek, Lacey Township, near the Jersey Central Power & Light Co. nuclear powered generating plant. (Press Photo)

Board Planning to Introduce

Area in Decade

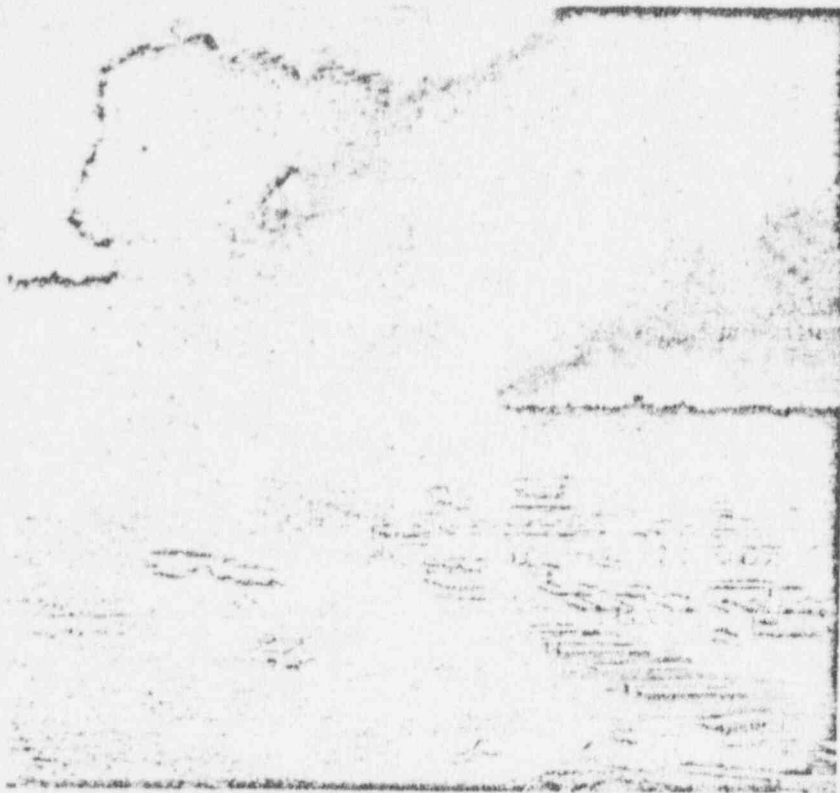


Photo by Dwight J. Johnson

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County officials said at the time that they felt they had first claim to the money since it was from the people of Hudson County that the money was taken. Stern said then that in his opinion the IRS had first claim to the money.

In addition to Whelan, Kenny and Wolfe, convictions were handed out to former Jersey City Council President Thomas Flaherty, former

Hudson County Police Chief Fred Kropke, former Port Authority of New York and New Jersey Commissioner William Sternkopf, former Jersey City Business Administrator Phillip Kuaz, former Jersey City Purchasing Agent Bernard Murphy and former Hudson County Treasurer Joseph Stapleton.

All except Wolfe, who got a suspended sentence, are in prison.

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ed the probation report as claiming that some persons in the area "complained bitterly" about Miele's activities and charged that one "purchased a watchdog to keep Dr. Miele's clientele off his premises."

Miele, who claimed that he has had a "drinking" problem over the past 10 years, told the court yesterday he was "very, very sorry" about the situation, but maintained it was "not my fault."

abused the good I was attempting to do."

Cutillo testified at the trial that he was a registered nurse. But according to the government, Cutillo was impersonating a nurse while working for Miele and had been reprimanded by the State Board of Nursing for impersonating a registered nurse.

Miele still faces sentencing on a charge in Essex County

New fish kill reported near nuclear plant

By HERBERT B. FISHBERG

The second fish kill in nearly a year in waters behind a nuclear generating station in Ocean County occurred yesterday morning.

Hundreds of mossbunkers, a type of warm water herring, were found lying beneath the ice-covered lagoons of Oyster Creek in Ocean Township according to Charles Malley, the owner of a marina on the creek.

The plant is owned by Jersey Central Power and Light Co.

Malley, who reported the kill to township health officials and the police, said that he observed dead fish as far as 1½ miles from the plant.

D.W. Bennett, conservation director for the American Littoral Society, a national conservation group with offices in Sandy Hook, pointed to the power plant's operation as the direct cause of both yesterday's fish kill and one involving the same fish species last January 29 in the same location.

Both fish kills occurred while the plant was shut down for maintenance.

Bennett said that the warm water discharged from the plant during its operation attracts the bunkers, which normally thrive in water temperatures no lower than

60 degrees fahrenheit. When the plant's operation stops, however, the warm water discharges also stop, which could mean a sudden water temperature drop from degrees to 40 degrees minutes, depending on how low the air temperature he explained. The sudden drop in temperature traps bunkers, which are killed by shock from the sudden temperature change, he said.

The bunkers, which usually migrate south to the Carol after October remained in Oyster Creek because of artificially produced water temperatures, Bennett said.

A spokesman for Jersey Central denied yesterday the kills were caused by the plant's operations. He attributed the kill to natural causes — the arctic temperatures experienced this week and last January.

He pointed out that the plant was closed for annual maintenance on Dec. 29, the latest fish kill did not occur until more than a week later.

Last year's fish kill reported the day after plant closed.

Bennett explained that last week's air temperatures were warmer than yesterday's, allowing the water temperature to cool slowly after plant closed.

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