



RESPONSE TO FREEDOM OF INFORMATION ACT (FOIA) REQUEST

RESPONSE TYPE	
FINAL	<input checked="" type="checkbox"/> PARTIAL
DATE JAN 11 1996	
DOCKET NUMBER(S) (if applicable)	

REQUESTER
David DeKok

PART I. - AGENCY RECORDS RELEASED OR NOT LOCATED (See checked boxes)

- No agency records subject to the request have been located.
- No additional agency records subject to the request have been located.
- Requested records are available through another public distribution program. See Comments section.
- Agency records subject to the request that are identified in Appendix(es) A are already available for public inspection and copying at the NRC Public Document Room, 2120 L Street, N.W., Washington, DC.
- Agency records subject to the request that are identified in Appendix(es) B are being made available for public inspection and copying at the NRC Public Document Room, 2120 L Street, N.W., Washington, DC, in a folder under this FOIA number.
- The nonproprietary version of the proposal(s) that you agreed to accept in a telephone conversation with a member of my staff is now being made available for public inspection and copying at the NRC Public Document Room, 2120 L Street, N.W., Washington, DC, in a folder under this FOIA number.
- Agency records subject to the request that are identified in Appendix(es) _____ may be inspected and copied at the NRC Local Public Document Room identified in the Comments section.
- Enclosed is information on how you may obtain access to and the charges for copying records located at the NRC Public Document Room, 2120 L Street, N.W., Washington, DC.
- Agency records subject to the request are enclosed. (App. B & releasable portions of App. C)
- Records subject to the request have been referred to another Federal agency(ies) for review and direct response to you.

Fees

You will be billed by the NRC for fees totaling \$ _____

You will receive a refund from the NRC in the amount of \$ _____

In view of NRC's response to this request, no further action is being taken on appeal letter dated _____, No. _____

PART II. A - INFORMATION WITHHELD FROM PUBLIC DISCLOSURE

- Certain information in the requested records is being withheld from public disclosure pursuant to the exemptions described in and for the reasons stated in Part II, B, C, and D. Any released portions of the documents for which only part of the record is being withheld are being made available for public inspection and copying in the NRC Public Document Room, 2120 L Street, N.W., Washington, DC in a folder under this FOIA number.

COMMENTS

SIGNATURE, DIRECTOR, DIVISION OF FREEDOM OF INFORMATION AND PUBLICATIONS SERVICES

Mary Jean Pool (for)

9601290064 960111
 PDR FOIA
 DEKOK95-389 PDR

**RESPONSE TO FREEDOM OF
INFORMATION ACT (FOIA) REQUEST
(CONTINUATION)**

FOIA NUMBER(S)

FOIA — 95-389

DATE

JAN 11 1996

PART II B — APPLICABLE EXEMPTIONS

Records subject to the request that are described in the enclosed Appendix(es) C are being withheld in their entirety or in part under the Exemption No. (s) and for the reason(s) given below pursuant to 5 U.S.C. 552(b) and 10 CFR 9.17(a) of NRC regulations.

1. The withheld information is properly classified pursuant to Executive Order. (Exemption 1)

2. The withheld information relates solely to the internal personnel rules and procedures of NRC. (Exemption 2)

3. The withheld information is specifically exempted from public disclosure by statute indicated. (Exemption 3)

Sections 141-145 of the Atomic Energy Act, which prohibits the disclosure of Restricted Data or Formerly Restricted Data (42 U.S.C. 2161-2165).

Section 147 of the Atomic Energy Act, which prohibits the disclosure of Unclassified Safeguards Information (42 U.S.C. 2167).

4. The withheld information is a trade secret or commercial or financial information that is being withheld for the reason(s) indicated. (Exemption 4)

The information is considered to be confidential business (proprietary) information.

The information is considered to be proprietary information pursuant to 10 CFR 2.790(d)(1).

The information was submitted and received in confidence pursuant to 10 CFR 2.790(d)(2).

5. The withheld information consists of interagency or intraagency records that are not available through discovery during litigation. (Exemption 5). Applicable Privilege:

Deliberative Process: Disclosure of predecisional information would tend to inhibit the open and frank exchange of ideas essential to the deliberative process. Where records are withheld in their entirety, the facts are inextricably intertwined with the predecisional information. There also are no reasonably segregable factual portions because the release of the facts would permit an indirect inquiry into the predecisional process of the agency.

Attorney work-product privilege. (Documents prepared by an attorney in contemplation of litigation.)

Attorney-client privilege. (Confidential communications between an attorney and his/her client.)

6. The withheld information is exempted from public disclosure because its disclosure would result in a clearly unwarranted invasion of personal privacy. (Exemption 6)

7. The withheld information consists of records compiled for law enforcement purposes and is being withheld for the reason(s) indicated. (Exemption 7)

Disclosure could reasonably be expected to interfere with an enforcement proceeding because it could reveal the scope, direction, and focus of enforcement efforts, and thus could possibly allow recipients to take action to shield potential wrongdoing or a violation of NRC requirements from investigators. (Exemption 7 (A))

Disclosure would constitute an unwarranted invasion of personal privacy. (Exemption 7(C))

The information consists of names of individuals and other information the disclosure of which could reasonably be expected to reveal identities of confidential sources. (Exemption 7 (D))

OTHER

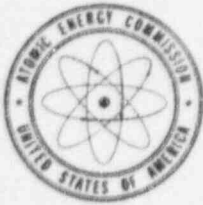
PART II. C — DENYING OFFICIALS

Pursuant to 10 CFR 9.25(b) and/or 9.25(c) of the U.S. Nuclear Regulatory Commission regulations, it has been determined that the information withheld is exempt from production or disclosure, and that its production or disclosure is contrary to the public interest. The persons responsible for the denial are those officials identified below as denying officials and the Director, Division of Freedom of Information and Publications Services, Office of Administration, for any denials that may be appealed to the Executive Director for Operations (EDO).

DENYING OFFICIAL	TITLE/OFFICE	RECORDS DENIED	APPELLATE OFFICIAL		
			EDO	SECRETARY	IG
William T. Russell	Director, Office of Nuclear Reactor Regulation	Appendix C	X		

PART II. D — APPEAL RIGHTS

The denial by each denying official identified in Part II.C may be appealed to the Appellate Official identified there. Any such appeal must be made in writing within 30 days of receipt of this response. Appeals must be addressed, as appropriate, to the Executive Director for Operations, to the Secretary of the Commission, or to the Inspector General, U.S. Nuclear Regulatory Commission, Washington, DC 20555, and should clearly state on the envelope and in the letter that it is an "Appeal from an Initial FOIA Decision."



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. Plurise
K. E. Plurise, Reactor Inspector

1/11/73
Date

A. Date and Manner AEC 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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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 Gyster Creek. The licensee's representative stated that their consultant is preparing a report of the studies being conducted.

JUARY 9, 1973

29

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 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 encourages the growth of

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These fish flocks are seen only at water, and others visible beneath the surface. A few of many found and yesterday in Oyster Creek, Jersey Central Power & Light Co. nuclear powered generating plant.

Board Planning to Introduce

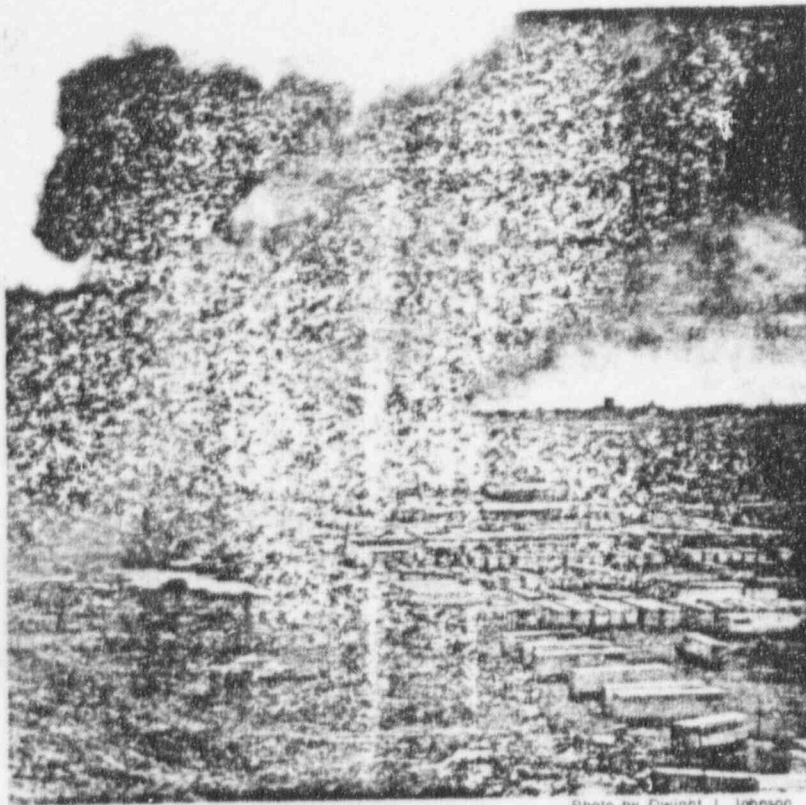


Photo by Dwight J. Johnson

smoldering metropolitan under control when firefighters bulldozed tons of dirt on it. A fire department spokesman said the fire was caused by spontaneous ignition of oil rags in the dump.

son and Jersey other perceive an interperity may ile a claim that there altitude of ey surfaced when Stern 595 to the re Hudson e Organiza County gov-

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.

MD gets 10 years

practice" ts, young- over New ersey" fro- "ney main- "notorious" vities that e area be- ed and an extent a number honor his judge qu-t-

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 that people

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 Court. He pleaded guilty there on No. 28, 1972, to five

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. the plant's operation however, the warm discharges also stop, could mean a sudden temperature drop fro degrees to 40 degree minutes, depending on low the air temperatu be explained. The drop in temperature tra bunkers, which are by shock from the temperature change, he

The bunkers, which migrate south to the Ca after October remain Oyster Creek because artificially produced temperatures, Bennett

A spokesman for Central denied yesterday the kills were caused plant's operations. I tributed the kill to causes — the arctic temperatures expe this week and last Jan

He pointed out the plant was closed for maintenance on Dec. the latest fish kill occur until more than later.

Last year's fish k reported the day af plant closed.

Bennett explained ti week's air temperature warmer than yesterday lowing the water ture to cool slowly a plant closed.

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JAN 30 1973

J. G. Keppler, Chief, Reactor Testing & Operations Branch
Directorate of Regulatory Operations, HQ

RO INQUIRY REPORT NO. 50-219/73-02Q
JERSEY CENTRAL POWER AND LIGHT COMPANY
OYSTER CREEK - BWR
FISH KILL FROM DECREASE IN COOLING WATER TEMPERATURES

The subject inquiry report is forwarded for your action in that this problem may be generic. As previously reported in RO Inquiry Report No. 50-219/73-01Q a significant number of fish were killed by decreasing cooling water temperatures when the Oyster Creek plant was shut down on December 29, 1972. It is recommended that future Technical Specifications be written to clearly identify the requirement to notify Regional Offices of any planned or unplanned shutdowns which potentially could lower the cooling water temperature below 45°F. This would allow sufficient time for an evaluation by RO and State agencies of the potential impact on this local marine environment under such conditions.

Dr. Charles O. Gallina, Acting Senior
Environmental Protection & Special
Programs Section

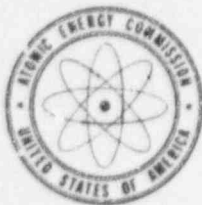
Enclosure:
RO Inquiry Report No. 50-219/73-02Q (21 cys)

cc: RO Chief, Reactor Testing & Operations Branch, HQ (21)
RO Chief, Environmental Inspection Branch, HQ
RO:HQ (5)
PDR, *rpt only*
Local PDR, *rpt only*
NSIC, *rpt only*
DTIE
State of New Jersey, *rpt only*

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OFFICE ▶	GRESS I <i>cap.</i>	<i>JS</i>		<i>g.c.</i>	<i>CA</i>
SURNAME ▶	Gallina:dw	Stohr	Cantrell	Caphton	Carlson
DATE ▶	1-24-73				



UNITED STATES
ATOMIC ENERGY COMMISSION
DIRECTORATE OF REGULATORY OPERATIONS
REGION 1
970 BROAD STREET
NEWARK, NEW JERSEY 07102

RO Inquiry Report No. 50-219/73-02Q

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

License No.: DPR-16

Facility: Oyster Creek
Forked River, New Jersey

Descriptive Title: Fish Kill from Decrease in Cooling Water Temperatures

Prepared by: Charles O. Gallina 1/24/73
C. O. Gallina, Ph.D., Radiation Specialist Date

A. Date and Manner AEC was Informed:

Report was received on January 22, 1973 from RO:I consultant, Mr. John Reintjes (Atlantic Estuarine Fisheries Center, Beaufort, North Carolina) who was investigating a fish kill at Oyster Creek (Reference RO Inquiry Report No. 50-219/73-01Q).

B. Description of Particular Event or Circumstance:

Mr. Reintjes report indicates that estimates of the total number of fish (menhaden) killed at Oyster Creek during the period of December 29, 1972 through January 10, 1973 range from 18,000 to 58,000. These numbers are extrapolated estimates based on very limited sampling, and are only estimates of the fish to be found in the surface ice. It is highly probable that an even greater number of menhaden could be found on the bottom of the finger lagoons since these fish have very small swim bladders and usually do not surface when killed. Based on very limited sampling by the New Jersey Division of Fish, Game and Shellfish, and taking into account both the surface and bottom estimates of fish killed

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the menhaden mortality could have been as high as 1.2 million.

The estimates presented in the consultants report are as follows:

<u>Source</u>	<u>Fish Killed (Surface ice)</u>	<u>Fish Killed (Total)</u>
Dr. Charles Wurtz (licensee consultant)	18,000	-
N.J. Division of Fish, Game & Shellfish	23,000	1,200,000
Mr. Mallie (Briarwood Yacht Basin)*	58,000	-

C. Action by Licensee:

The licensee is continuing its evaluation of this particular occurrence and studies will be conducted in order to alleviate the problem in the future. The licensee stated that an information report of the incident would be submitted by February 12, 1973.

*Information received via Mid-Atlantic Coastal Fisheries Center,
Sandy Hook, New Jersey.

MAR 8 1973

J. G. Keppler, Chief, Reactor Testing & Operations Branch
Directorate of Regulatory Operations, HQ

RO INQUIRY REPORT NO. 50-219/73-03Q
JERSEY CENTRAL POWER AND LIGHT COMPANY
OYSTER CREEK - BWR FISH KILL

The subject inquiry report is forwarded for your information. As reported in RO Inquiry Report Nos. 50-219/73-01Q and 50-219/73-02Q, a significant number of menhaden were killed by decreasing water temperatures when the Oyster Creek plant was shutdown on December 29, 1972. This latest fish kill may not have been directly related to decreasing cooling water temperatures as the plant was in operation at the time the fish started dying. There have been indications that the latest kill might have been the result of microbial infection. Further investigations are being conducted into this possibility. However, one late breaking news item quoting Dr. Pearce, Director of Sandy Hook Marine Laboratories, seems to indicate that a seasonal cold front was the cause for the latest kill. Dr. Pearce said that the surviving menhaden were under "great stress" and that the first cold front killed them.

Inspectors from RO:I will be visiting the Oyster Creek site on February 28 through March 7, 1973 to conduct an inspection of the Oyster Creek Environmental Monitoring Program. During this inspection, the matter of recent fish kills will be reviewed.

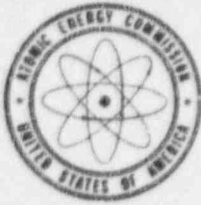
J. P. Stohr, Senior
Environmental Protection and

cc: RO Chief, Environmental Inspection Br.
RO:HQ (5)
DR Central Files
PDR, rpt. only
NSIC, rpt. only
LPDR, rpt. only
DTIE, rpt. only
State of New Jersey, rpt. only
Directorate Of Licensing (13)
RO Directors (4)
RS (3)

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UNITED STATES
ATOMIC ENERGY COMMISSION
DIRECTORATE OF REGULATORY OPERATIONS
REGION 1
970 BROAD STREET
NEWARK, NEW JERSEY 07102

RO Inquiry Report No. 50-219/73-03Q

Licensee: Jersey Central Power and Light Company (JCPL)
Madison Avenue at Punch Bowl Road
Morristown, New Jersey 07960

License No.: DPR-16

Facility: Oyster Creek, Forked River, New Jersey

Descriptive Title: Fish Kill

Prepared by: J. P. Stohr
C. O. Gallina, Ph.D., Radiation Specialist

A. Date and Manner AEC was Informed:

Articles were observed in local newspapers (commencing on or about February 17, 1973) and the matter was discussed with RO:I consultant, Mr. John Reintjes (Atlantic Estuarine Fisheries Center, Beaufort, North Carolina) who had been in communication with JCPL personnel and other agencies on this subject. Also, J. P. Stohr, RO:I, was at Oyster Creek site on February 21, 1973 and observed dead fish along the banks and floating in the discharge canal as well as seagull activity in the area.

B. Description of Particular Event or Circumstance:

Information obtained from the licensee and Mr. Reintjes indicated that there had been a fish kill (thousands of 1 1/2 to 4 inch menhaden) commencing on or about February 16 and 17, 1973 in the Oyster Creek discharge canal. The nuclear power plant had been operating prior to and during the initial phases of this kill.

Cold shock does not appear to have been the direct cause of the fish dying during this period of time. Subsequent similar fish kills were reported on February 18 and on February 21 and 22, 1973. The licensee has stated that the subsequent kills were, in effect, continuing phases of the original kill which commenced on February 16, 1973. The correlation of these kills with any particular plant activity is not known at this time, although the licensee reported that the plant was shutdown for approximately eight hours beginning late on February 18, 1973 during which time the discharge canal water temperature dropped from an ambient of approximately 54°F to approximately 33°F. The licensee stated that it was his belief that the shutdown may have accelerated the fish kill which was already in progress.

C. Action by Licensee:

The licensee is evaluating these occurrences and has stated that RO:I will be informed as to the results of their findings.

Fish Kill Along Oyster Creek To Be March Meeting Topic

Asbury Park 3-2-75

WARETOWN — Ocean Township Mayor Engel Sprague says officials of the Jersey Central Power & Light Co. have agreed to meet the public March 14 for questioning about the recent fish kill in Oyster Creek.

Mayor Sprague last night said the meeting has been scheduled for 8 p.m. at the Waretown Fire House, Railroad Ave.

JCP&L officials also are expected to answer questions about the anticipated ecological impact of the additional nuclear power plant which has been proposed near the existing Lacey Township power facility.

Mayor Sprague said an explanation also is expected about an estimated 50,000 gallons of polluted water being kept in a holding tank after it mistakenly leaked from the plant's nuclear reactor core.

Thousands of fish have been killed in the creek in recent months following various JCP&L plant shutdowns which cause a rapid drop in the creek's water temperature. Federal biologists are studying how the fish, mostly menhaden, were killed.

Meanwhile, Mayor Sprague said the date for a meeting called with county, state, and

federal legislative leaders about possible action against JCP&L has not been finalized. But he said he was pleased JCP&L has agreed to supply the county Board of

Freeholders with a quarterly report of plant activities which in turn will be forwarded to the governing bodies of Lacey and Ocean townships.

Fish Deaths At A-Plant *Thurs. Deaths* *Prs* Continuing

WARETOWN — A massive fish kill — numbering perhaps in the hundreds of thousands — greeted residents along Oyster Creek here yesterday morning, the third and by far the largest in the last six days downstream from the Jersey Central Power and Light Co. nuclear generating plant.

The latest kill and the kill reported last Friday have baffled biologists from JCP&L because the nuclear plant had not been shut down, causing a sudden drop in the temperature of the creek that has been blamed for a massive kill a year ago and another last month.

Edwin Sherratt, regional director of public relations for the utility company, said consulting biologists are continuing their study of the recent fish kills.

He said John Rentjes, a federal marine fisheries biologist, has asked the utility to gather the dead fish for examination at the Sandy Hook marine labs.

Mr. Sherratt said Mr. Rentjes was unwilling to guess as to the reason for red blotches on the fish.

Henry Kurtz, co-owner of the Oyster Creek Marina, said biologists from the federal laboratory at Sandy Hook, were skin diving in various parts of the creek, taking samples of the dead fish and the water.

Mr. Kurtz said one of the biologists told him they found many fish still in their throats as they explored areas of the creek late yesterday. Mr. Kurtz said the biologist told him hundreds of thousands of fish had been killed and the bottom of the creek was covered with them.

The first of the latest kills was reported Friday and Mr. Sherratt said the plant was operating then. The second kill was reported Sunday but Mr. Sherratt said the plant shut down for several hours late Saturday night and wasn't in full operation again until late Sunday morning.

But from Sunday on, the plant has been operating at normal capacity and it was

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Osborn Press

Federal Biologists Probing Third Fish Kills at A-Plant

From Page 1
reported by Mr. Kurtz that the temperature of the water in the creek has not dropped below 44 degrees since Sunday and was in the mid-fifties yesterday morning.

Meanwhile, Ocean Township Committeeman Fred Landgraber visited Oyster Creek yesterday morning and leveled a blast at JCP&L officials for not agreeing to meet with township officials.

Mr. Landgraber said company officials are "taking an attitude of the public be damned," as he stood looking at several hundred dead fish floating near the bulkhead at the Oyster Creek Marina.

Mr. Kurtz said the fish kill yesterday was new, adding the creek was "completely clean of dead fish Tuesday."

Thousands of sea gulls were observed flying up and down the creek. Suddenly, several hundreds would swoop down on a mass of dead fish floating in the creek and pick the area clean in minutes before taking off for another area.

Marinas in the area were awash with thousands of the menhaden the gulls weren't bothering with as long as there was plenty to eat in the mainstream. Most of the

menhaden were from two to four inches long but some ranged up to seven or eight inches in length.

Mr. Sherratt said he met yesterday with consulting biologists who said they could offer no explanation for the fish kill while the plant was operating. He said they assume thermal shock killed the fish when the water temperature dropped when the plant shut down.

Mr. Sherratt said the biologists could offer no reason either for the fact so many menhaden survived earlier fish kills only to die during a later kill except that perhaps they were not in Oyster Creek at the time.

He said some biologists felt it possible some menhaden were living in Barnegat Bay, found their way into the warmer waters of Oyster Creek and then perished from the sudden drop in temperature.

Mr. Sherratt explained the temperature dropped suddenly Sunday morning during a test conducted by the Atomic Energy Commission (AEC) late Saturday night.

He explained the output of the plant was dropped to half the normal 640,000-kilowatt output during the test when

the nuclear reactor shut down. He said it was started up again about 1 a.m. Sunday but it was late in the morning when the plant was back at normal capacity.

He said this caused a sudden drop in the temperature of the creek which may have caused Sunday's kill.

Biologists from state and federal laboratories were on the scene yesterday taking samples of fish for study but none were available for comment.

A large fish kill took place a few days after the plant shut down Dec. 29 because of a misfire. The plant stayed closed for 11 days but had been operating since that time until Sunday.

Mr. Sherratt disputed the charge by Ocean Township officials that company representatives won't meet with local officials. He said the company did turn down a request for a meeting this week because those who take part in such a meeting were involved with an environmental report for an AEC hearing on the proposed Forked River nuclear generating station to be located near the Oyster Creek plant.

A-Plant Shutdown Data Is Demanded

WARETOWN — The Ocean Township Committee has called for help from federal, state, and county officials to force the Jersey Central Power & Light Co. to supply the township with information about its nuclear plant.

Mayor Engel Sprague last night said the Committee will call a meeting — “hopefully for Tuesday” — to see if the officials can offer some legislation which would force the company to notify adjacent municipalities when there is a plant shutdown or any type of malfunction.

“At least that way when we get calls from our citizens we will be able to offer some explanation, whether it's good or bad,” said Mayor Sprague.

He said the Committee has been barraged with requests for information from local residents incensed by the recent series of fish kills in Oyster Creek. And he said

the power company has, in effect, left the township in the dark about the series of plant shutdowns which drop the water temperature in the creek.

Mayor Sprague said he hoped to get some solid help from those invited to the meeting. They include Rep. Charles Sandman Jr., R-N.J., Sen. John F. Brown, Sen. Barry T. Parker, and Assemblymen Franklin H. Berry Jr., James J. Mancini, and Benjamin H. Mabie, and Ocean County Freeholder Director Joseph Portash.

“As a township we're limited in what we can do, but we have to find out what kind of help we can get,” said Mayor Sprague at a Committee caucus.

Mayor Sprague said he was told by a JCP&L spokesman last night the power company would notify the Committee by early next week. He said the company would be asked to answer questions about the fish kills and the recent breakdown at the plant.

“Our concern is that the same thing happened a year ago and there doesn't seem to have been any corrective action taken — nothing is being done,” he said.

Last month the Committee asked the Atomic Energy Commission to make JCP&L insure that sudden drops in the Oyster Creek water temperature would not recur. Mayor Sprague said the AEC has acknowledged the request but has not responded further.

Meanwhile, Committeeman Emile Dupont said he has been informed an environmental hearing would be scheduled April 16 by the AEC to examine the impact of the next nuclear power plant proposed by JCP&L for Lacey Township.

Expert blames cold snap for fish kill near A-plant

By GORDON BISHOP

A "thermal shock" brought on by a seasonal cold front apparently killed hundreds of thousands of warm-water fish near the site of a nuclear generating plant in Ocean County, according to Dr. Jack B. Pearce, director of Sandy Hook Marine Laboratories. Dr. Pearce said yesterday

the nuclear plant, owned and operated by Jersey Central Power and Light Co., "probably did not directly cause the fish kill" eight days ago.

The marine biologist disclosed that the cold front that crossed over New Jersey a week ago may have lowered the temperature enough to kill whatever warmwater fish

were in Oyster Creek, the tributary that provides water to the generating station.

"There are many other cold water species of fish in Oyster Creek that have not been affected," Dr. Pearce said.

The affected fish were the Atlantic menhaden or "moss bunkers," which normally migrate to the coastal waters off the Carolinas in the winter months but remained in the Jersey channel instead because its waters are kept warm by thermal discharges from the nuclear plant.

Remappers work past 'deadline'

By FRED HILLMANN

The State Apportionment Commission yesterday continued work on a tightly drawn legislative remap for New Jersey, while ordering further study of a U.S. Supreme Court decision permitting more lenient standards in mapping state districts.

Members of the commission, who had hoped to produce a finished legislative map yesterday, said they continued their work because the ramifications of the high court ruling are not yet clear.

"At this point we don't know what it means," said Mercer County Democratic Chairman Richard J. Coffee, co-chairman of the bipartisan commission.

Coffee said there is a "strong possibility" the panel will be forced to finish its plan as ordered. "We are doing everything possible to prepare our-

ginia reapportionment plan that allows a maximum deviation of 16.4 per cent from the average legislative district.

In permitting greater leeway from the one-man, one-vote rule, the court also ordered that the integrity of county lines should be maintained where possible.

The State Supreme Court ruling last year overturning New Jersey's legislative map held that existing leeways, as high as 23 per cent, were too great a deviation from the one-man, one-vote principle.

The state top court ordered a remap — providing for 40 districts, each with one senator and two assemblymen — and, in a significant move, struck down county lines as the basis of redistricting.

Coffee said the commission has instructed its legal coun-

Dr. Pearce said the menhaden are "sinkers," in that they sink to the bottom of a river as soon as they succumb to shock. After decomposition begins, the fish float to the surface. The cycle can take from two days to a week.

"We've had reports that there were several fish kills in Oyster Creek," Dr. Pearce said, "but it was probably just that one thermal shock last week."

The creek is 20 feet deep and more than a mile long.

Thousands of menhaden were killed in January when the nuclear plant was shut down for maintenance. Dr. Pearce said the surviving menhaden may have been "under great stress" and the first cold front that came along killed them.

The Sandy Hook Marine Laboratories is also conducting an analysis of the fish to determine whether radiation or toxic chemicals had anything to do with the recent kill.

Ocean Twp. puts heat on A-plants over shutdowns

By HERBERT B. FISBERG

Ocean Township officials, who claim a nuclear generating station at Oyster Creek has caused four fish kills in the last year, said yesterday they will seek state legislation requiring nuclear plants to inform municipalities of all operating shutdowns for malfunctions.

Engel Sprague, mayor of the Ocean County municipality, said the township committee will try to meet with the state senators and assemblymen from Ocean County to have them introduce the legislation.

He added that he plans to meet with officials from Jersey Central Power and Light Co., which operates the Oyster Creek plant, to try to find some solution to the problem. Sprague explained the purpose of the legislation would be to establish better communication between the plant officials and community.

While admitting the plant was responsible for the first fish kill in the creek on January 26, 1972, the company has denied it was responsible for three subsequent kills last December and last Friday and Sunday.

State and federal marine biologists have attributed the fish kills which involve mostly the salt water moss

bunkers, an inedible bait herring, to sudden drops in water temperature, called thermal shock.

Except for last Friday's kill, which involved thousands of fish, the kills occurred at the same times the plant was shut down for required testing and maintenance.

When in operation, the plant discharges heated reactor water into the creek, which attracts the mossbunkers. These fish normally migrate to warmer waters south of the Jersey coast during the winter months.

Ocean Township's health board chairman, William Senkbeil, said that he believes the plant was also shut down last Thursday night due to a malfunction.

A company spokesman has denied, however, that the plant was shut down last Thursday.

Senkbeil said yesterday that thousands of decomposing mossbunkers, also known as Atlantic menhaden, were rising to the surface along the entire length of the creek. All were young fish, he explained, that must have been spawned during last summer and fall.

The mossbunkers, which are caught by Ocean County fishermen during the summer, are used for cat food and a number of products as well as bait.

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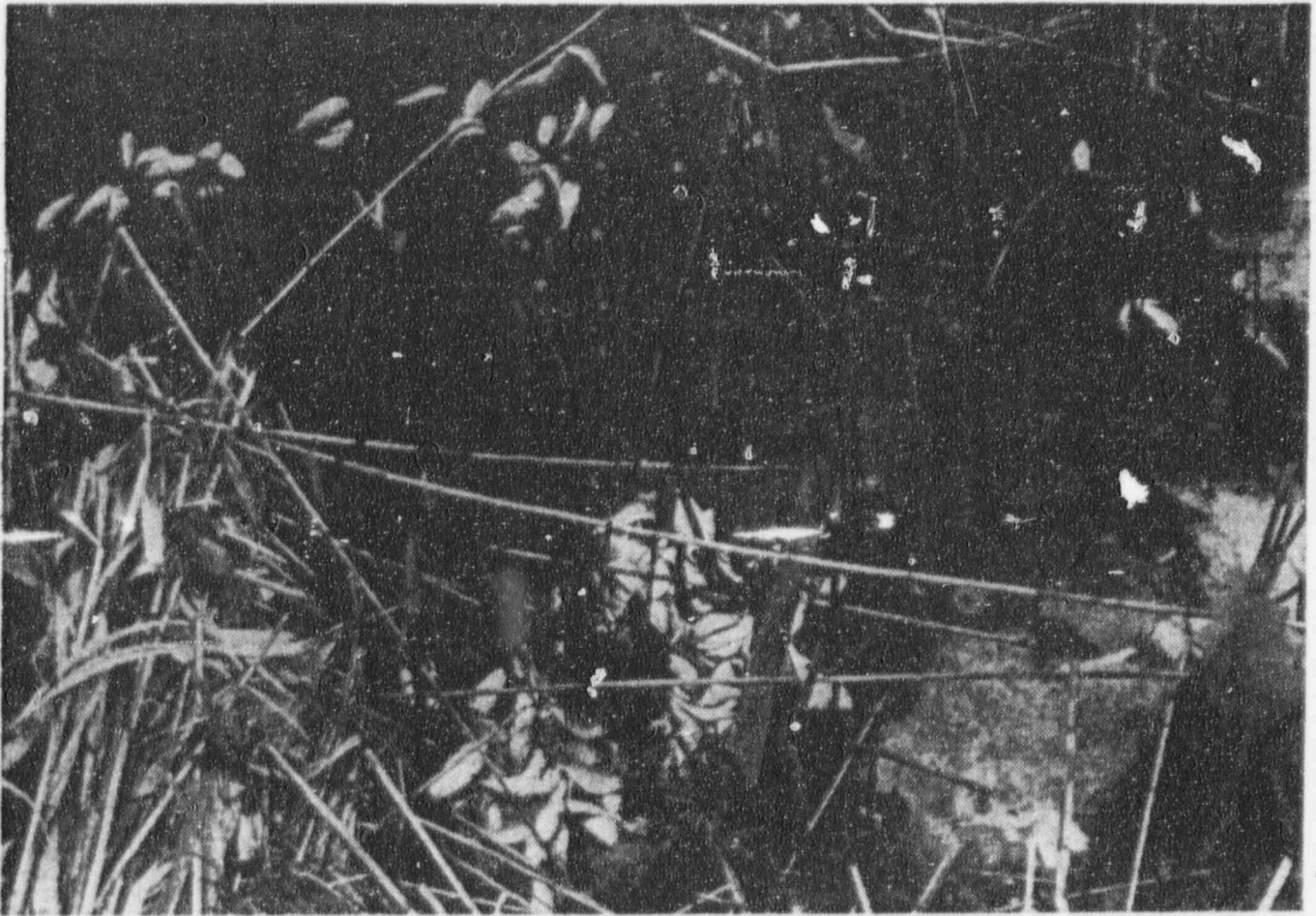
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Dead fish float in Oyster Creek and line its banks within a mile of the Jersey Central Power & Light Co.'s nuclear power generating station. (Press Photo)

Third Fish Kill Along Oyster Creek Occurs Within Mile of Power Plant

WARETOWN — The second fish kill in less than two months and third in 13 months hit Oyster Creek yesterday within a mile of the Jersey Central Power & Light Co.'s nuclear power generating station. Although the kill was less than the other two, it was the first while the plant was in operation.

Edwin Sherratt, regional director of public relations for JCP&L, said the company would investigate the fish kill. Several thousand men-

haden between two and three inches long were floating in the creek as hundreds of sea gulls filled the air.

Mr. Sherratt said the 50,000 gallons of contaminated water stored in a special cavity in the basement of the building had absolutely nothing to do with the death of the menhaden.

A mishap Dec. 29 shut down the plant for 10 days and may have led to the death of several thousand larger menhaden caught in the creek when the water temperature dropped sudden-

ly. It was during this mishap that 50,000 gallons of water became contaminated, but none of it left the plant storage facility.

The fish kill yesterday was reported by Charles Kurtz, owner of the Oyster Creek Marina, who said he got calls from several residents of the area.

Mr. Sherratt said he had no idea what killed the tiny menhaden but biologists would investigate. Many believe the prior fish kills resulted from the fish being

trapped in water below the temperature their systems can tolerate.

But Mr. Sherratt stated it definitely had nothing to do with the contaminated water. He said that water is still in the plant and can't get into Oyster Creek.

A faulty valve that was supposed to release about 100 gallons of contaminated water into a basement cavity failed to close properly and kept leaking until 50,000 gallons spilled into a cavity built for that purpose.

Police to Continue Pro

THE DAILY **REGISTER** *Middletown-Bayshore*

Monmouth County's Outstanding Home Newspaper

RED BANK, N.J. MONDAY, FEBRUARY 19, 1973

Hits JCPL For Ocean Fish Kill

OCEAN TOWNSHIP (AP)
— The mayor of this Ocean County community says he'll consult the State Legislature in an effort to bring action against the Jersey Central Power and Light Co. following the second fish kill in three days in Oyster Creek.

Mayor Engel Sprague said yesterday that he found dead fish floating in the creek and lying along the shore. Tests revealed that the water temperature had dropped from 48 to 28 degrees earlier in the day, according to the mayor.

Last Friday, a similar fish kill took place in the creek, but preliminary tests did not indicate that a temperature drop had taken place, Sprague said.

Other fish kills in the creek occurred last month and in January, 1972, and environmentalist blamed both on the power company.

"We are getting nowhere with JCP&L Co.," Sprague said Sunday. "We seem to be getting the runaround."

The mayor said he would meet with local legislators in an effort to bring the situation to the attention of state authorities.

Company officials have refused to comment on the fish kills, according to Sprague.

Expert blames cold snap for fish kill near A-plant

By GORDON BISHOP

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The marine biologist disclosed that the cold front that crossed over New Jersey a week ago may have lowered the temperature enough to kill whatever warmwater fish

were in Oyster Creek, the tributary that provides water to the generating station.

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The Sandy Hook Marine Laboratories is also conducting an analysis of the fish to determine whether radiation or toxic chemicals had anything to do with the recent kill.

A second Shore fish kill baffles marine scientists

The second massive fish kill in Ocean County's Oyster Creek in as little as two months occurred yesterday but has left state marine scientists guessing as to the cause.

Henry Kurtz, a marina operator at the creek in Waretown, reported sighting thousands of dead moss bunkers

in the early morning hours floating on the creek less than a mile from Jersey Central Power and Light Co.'s Oyster Creek nuclear generating plant.

The fish, a warm water inedible herring also known as Atlantic Menhaden, was the only species observed yesterday.

State marine scientists who took samples of the kill, had not determined what caused it yesterday.

The scientists attributed the last fish kill in December to thermal shock produced when the nuclear plant was shut off for routine maintenance.

The plant, when in operation, discharges heated reactor water into the creek. This process creates an artificial environment for the moss bunkers which normally migrate south to warmer waters during the winter.

* * *

When the plant was shut off for routine maintenance last December, cold water continued to be pumped in and discharged into the creek, causing a rapid decline in the temperature.

Yesterday, however, the plant was in operation, a company spokesman reported. He said the plant's operation had not stopped since it was resumed Jan. 10.

MAR 15 1973

J. P. Stohr, Senior, Environmental Protection & Special Programs Section
 Directorate of Regulatory Operations, Region I

RO INQUIRY REPORT NO. 50-219/73-02Q
 FISH KILL FROM DECREASE IN COOLING WATER TEMPERATURES - OYSTER CREEK
 RESPONSE TO MEMO FROM C. A. PELLETIER, DATED MARCH 5, 1973

The following comments are presented as a clarification to the forwarding memo for the subject report sent by me to J. Keppler, dated January 30, 1973 and in response to a memo sent to you by C. Pelletier, dated March 5, 1973. I have attempted to answer Dr. Pelletier's questions in the order presented in this memo.

1. "Unplanned" shutdowns include occurrences which would cause a reactor scram such as turbine trips, high pressure, variable low pressure, high flux or overpower, low reactor coolant flow, etc. Many of the "unplanned" shutdowns or scrams do not constitute an abnormal occurrence and therefore, do not require notification of RO:I. These "unplanned" shutdowns, therefore, go unnoticed for a period of time (until next inspection) or until some other, more obvious event occurs, such as a fish kill. Nowhere in the original memo was "advanced" notification of "unplanned" shutdowns recommended as this is, of course, impossible.
2. Many factors have been found to affect the extent and magnitude of a cold-shock fish kill. These factors are variable depending on the location of the plant and include such items as; a.) past history of water and air temperatures, b.) non-fatal temperature changes to which the fish had been exposed prior to a fatal temperature change, c.) the temperature to which fish have acclimated before rapid temperature change, d.) salinity during the rapid temperature change, e.) turbidity and other naturally occurring water conditions such as foaming, pH, DO, etc. In addition, biologists from Sandy Hook Marine Laboratory and the New Jersey Division of Fish, Game and Shellfish (Nacote Creek) stated that in some cases, there is little that can be done in identifying the cause of a fish kill unless the fish can be caught and analyzed in process of dying. Once the fish are dead, one can only hope to rule out possible causes of death (for example, radiological or heavy metals) by after-the-fact analyses. If Oyster Creek were to notify RO:I of an "unplanned" shutdown as might occur from a turbine trip, RO:I would notify the New Jersey Department of Environmental Protection, who in turn would notify the New Jersey Division of Fish, Game and Shellfish.

OFFICE ▶	CRESS: I <i>CS</i>									
SURNAME ▶	Gallina: pac									
DATE ▶	3/15/73									

B/S

RO:I would also notify the Sandy Hook Marine Laboratories who have agreed (informally) to send biologists to the site (including skin divers). In addition, RO:I will soon have the capability of analyzing for a variety of water quality parameters in the field. In essence, therefore, by notifying RO:I, the AEC would be able to determine why the fish were dying and not only the fact that the fish were dead. In the instance of the last Oyster Creek fish kill (beginning on February 16, 1973), if Oyster Creek had notified RO:I when the kill began, in my opinion, Sandy Hook Marine Laboratory would have in all probability discovered that the initial kill was caused by infectious agents and not by cold shock per se. The cold shock merely accelerated the kill.

3. The information required as an input for such an evaluation would come from three sources:
 - a. Oyster Creek would provide data such as temperature records (ambient air, intake and discharge), pump operation, flows, and discharges (radiological and non-radiological).
 - b. State and Federal officials and biologists would provide professional expertise and laboratories in an effort to determine the actual cause of the kill.
 - c. RO:I would provide water quality data (Oyster Creek is not capable of providing this data at this time). More importantly, RO:I would provide the coordinating function for the entire evaluative effort.
4. Even if the evaluation showed that a significant number of fish would be killed, the exact cause and mechanism would be more clearly understood. If the kill were bacterial in nature, for example, or bacterial complicated by thermal stresses, then this discovery might lead to the conclusion that the fish kill was not generic to a nuclear plant but rather a phenomenon common to other power plants (eg., LILCO'S Northport Fossil Plant). Information such as this could potentially lead to a long range solution. The evaluation could indicate possible ways of limiting the extent of the kill even if not being able to prevent it.
5. As mentioned in Dr. Pelletier's memo, normal operating characteristics of a nuclear plant, for all practical purposes, limit the action which the licensee can take to prevent, or even limit in some cases, a cold-shock fish kill. As the original recommendation stated, all RO:I would require was that the utility notify us of the unplanned shutdown once it occurred and provide us with certain operational data which be utilized in the evaluation by AEC and other Federal and State authorities in order to arrive at possible alternative courses of action within the operational capabilities of the plants involved. In my opinion, there are means which could be utilized to limit if not prevent wide spread

kills, and through a careful evaluation of what is occurring at the time it is occurring, the most effective recommendations can be made with respect to solving the problem. Again, as mentioned in Dr. Pelletier's memo, continued occurrences at a site or plant should be sufficient cause for a licensing review for the purpose of discussing modification of systems or other corrective actions with the licensee. The first step to be taken, however, should be a careful evaluation of what actually is occurring during the fish kill.

Charles O. Gallina, Ph.D.
Radiation Specialist



UNITED STATES
 ATOMIC ENERGY COMMISSION
 DIRECTORATE OF REGULATORY OPERATIONS
 REGION 1
 631 PARK AVENUE
 KING OF PRUSSIA, PENNSYLVANIA 19406

MAY 20 1974

Jersey Central Power & Light Company
 Attention: Mr. Ivan R. Finfrock
 Vice President
 Generation
 Madison Avenue at Punch Bowl Road
 Morristown, New Jersey 07960

License No. DPR-16

Gentlemen:

In response to a request by the State of New Jersey, this office has sent the state copies of the three enclosed reports which were prepared by Dr. John Reintjes while consulting with this office on fish bills at Oyster Creek.

Sincerely,

Paul R. Nelson, Chief
 Radiological and Environmental
 Branch

Enclosures:

1. January 19, 1973 "Comments relative to the Oyster Creek menhaden kill, January 1973, with estimates of the number of dead fish".
2. February 2, 1973 "Additional comments relative to the Oyster Creek menhaden kill, January 1973".
3. January 17, 1974 "Trip Report: Oyster Creek Nuclear Electric Generating Station, January 11-15, 1974".

(Attachment 1 to RO Inspection Report No. 50-219/74-01, dated February 7, 1974).

cc: Mr. J. T. Carroll
 Station Superintendent

B/b

OFFICE ▶	GRESS				
SURNAME ▶	Stour/mjd	Nelson	O'Reilly		BRUNNER
DATE ▶	5/17/74	5/20/74			GA-170

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Jersey Central Power Light
Company

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bcc: RO Chief, R&EPB RO:HQ
 RO Chief, FS&EB RS
 OGC DL
 PDR NSIC
 Local PDR DTIE
 RO Files
 DR Central Files
 RO:I Regulatory Reading Room
 Anthony Z. Roisman, Counsel for Citizens Committee for Protection
 of the Environment
 1712 N Street, Northwest
 Washington, D. C. 20036



State of New Jersey

DEPARTMENT OF ENVIRONMENTAL
PROTECTION

DIVISION OF
FISH, GAME AND SHELL FISHERIES
RUSSELL A. CODRINGTON
DIRECTOR

PLEASE REPLY
P. O. BOX 16
TRENTON, N. J.

Oyster Creek Research Station
Marine Fisheries Section
Star Route
Liberton, New Jersey 08201

April 25, 1974

Dr. John W. Reintjes
Marine
National Marine Fisheries Service
Beaufort, North Carolina 28515

Dear John,

Our attorney General in charge of our Oyster
Creek case has asked us to obtain all available in-
formation from the Beaufort Lab and Dr. Reintjes con-
cerning the fish kills at Oyster Creek.

Any material you can send us would be appreciated.
Best regards,

Sincerely yours,

Paul M. H.

Paul M. Huser
Marine Fisheries Biologist

12 10 4