



Jersey Central Power & Light Company

MADISON AVENUE AT PUNCH BOWL ROAD • MORRISTOWN, N. J. 07960 • 539-6111

January 11, 1973

Mr. J. P. O'Reilly, Director
Directorate of Regulatory Operations, Region 1
United States Atomic Energy Commission
970 Broad Street
Newark, New Jersey 07102

Dear Mr. O'Reilly:

Subject: Oyster Creek Station
Docket No. 50-219
Fuel Channel Study Program

The purpose of this letter is to provide the information requested by your Mr. F. Cantrell of Mr. T. J. McCluskey, our Oyster Creek Station Superintendent, as a matter of interest, regarding our fuel channel study program.

During the last refueling outage (May 1972), a visual observation of the outside surfaces of our fuel channels revealed whiteish-pale green deposits. In some cases, the deposit was seen to have spalled off. Samples of the scale deposit were retrieved and analyzed. The results indicated that the deposits were a zirconium oxide. A few similar deposits were also recovered from the control rod drive upper screens.

To further understand this observation, a program was initiated to retrieve samples of channels exhibiting the deposit/spalling. These samples will undergo detailed chemical and metallurgical analysis. Currently, the samples have been cut from the channels and are stored in the Oyster Creek spent fuel pool awaiting shipment to Vallecitos Nuclear Center.

The deposits observed on the channels do not pose a possible safety problem in regard to channel strength or the design use of the channels. The measured thickness of the chips range between 0.003 to 0.005 inches; and consequently, the loss of this material would not be expected to have an effect on channel strength.

There has been no indication of any control rod drive problem caused by this flaking. The control rod drive housings

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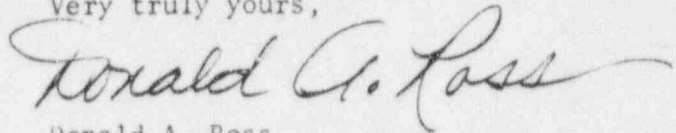
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did have radiation levels that were higher than that normally encountered during control rod drive maintenance. Any changes in observed control rod insertion times and stall flows which are verbally transmitted to Mr. Cantrell on a regular basis are attributable to normal seal wear.

I trust this letter is fully responsive to your interest for information on our fuel channel study program.

Very truly yours,

A handwritten signature in cursive script that reads "Donald A. Ross". The signature is written in dark ink and is positioned above the typed name and title.

Donald A. Ross
Manager, Nuclear Generating Stations

pk

CHARLES B. WU. Z, Ph.D., *Consulting Biologist*

3220 PENN STREET
PHILADELPHIA, PA. 19129
215-844-7461

11 January 1973

Mr. H. J. Williams
GPU Service Corporation
260 Cherry Hill Road
Parsippany, New Jersey 07054

Dear Mr. Williams:

On January 9th Mr. Roy Younger, of Resource Management, Inc., and I visited Oyster Creek as requested to investigate the reported fish kill. This letter is a report on the results of our investigation.

At the Route 9 bridge downstream to the end of the parking lot the stream was open with stretches of rim ice along the shore. Water temperature (at 1325) was 34°F at both the surface and the bottom. At 0900 three men were fishing, but they left before noon. No dead fish were seen.

For the lowermost 200 yards at the mouth of Oyster Creek, and along the bay shore for about one-half mile south from the mouth, no dead fish were seen. Rim ice was present along the shorelines.

In the short lagoon at the curve in Dock Ave. (where the newspaper photographs were taken last year) the surface was mostly ice covered. No dead fish were seen.

Four lagoons extend southerly from Oyster Creek and terminate at Bay Ave. These lagoons are bulkheaded and about 100 feet wide. At the butt end they were fully ice covered with the ice about three inches thick. We did see dead fish under (or in) the ice of these lagoons and made counts in the last 50 feet of each lagoon. Estimated numbers, based on our field counts, for each of these four lagoons from west to east follow.

Venice lagoon. An estimated 50 dead menhaden from four to eight inches long were seen in the terminal 5,000 square feet of the lagoon. In addition, a cluster of 20 to 30 one-inch bay anchovy were found dead and frozen into the ice.

Sanabelle lagoon. An estimated 400 dead menhaden were seen in the terminal 5,000 square feet of this lagoon. The size range was two to ten inches.

B/350

CHARLES B. WU, Ph.D., *Consulting Biologist*

Buccaneer lagoon. An estimated 50 dead menhaden were found in the terminal 5,000 square feet of this lagoon. These fish were all small, ranging in size from two to four inches.

Privateer lagoon. An estimated 400 dead menhaden were found in the terminal 5,000 square feet of this lagoon. These fish ranged in size from two to ten inches.

Although some gulls were seen on these laggons standing on the ice, the population was apparently the normal resident population. The many hundreds observed last year at the time of the fish kill were not seen this year.

The fish kill appeared quite small compared to that of January 1972. Only 900 menhaden were seen in 20,000 square feet of those areas where dead menhaden were found.

On January 8th, at 1400, Oyster Creek Plant personnel collected a sample of nine dead menhaden from Privateer lagoon. The size and weight of these fish follows.

10.25 inches	7 oz.
9.75 "	4 "
8.5 "	3 "
7.75 "	3 "
7.75*	3 "
7.25*	3 "
2.75 "	-
2.0 "	-

* Pecked by gulls.

These fish showed no scale loss, no cutaneous hemorrhages, no excessive accumulations of mucus, and no distension of the mouth, opercula or gills. Death can be assumed to be the result of a cold kill rather than mechanical damage or the effect of some toxicant.

A further field observation was made at the Beach Blvd. bridge over South Branch Forked River. Some shore ice was present. No dead fish were seen.

We also sampled in the mouth of the discharge pipe that carries water from the trash flume of the travelling screens. A work crew was performing maintenance on the screens and some discharge was coming through. A 15-minute sample produced one living Atlantic silversides, two dead Atlantic herring 2.5 and 3.25 inches long, and ten dead menhaden. Sizes of the latter were: 2.75, 2.75, 2.75, 3, 3, 3, 3, 3.25, 3.25, and 3.5 inches. Of

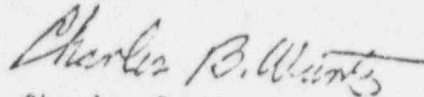
CHARLES B. WURTZ, Ph.D., *Consulting Biologist*

particular interest is the fact that these menhaden were from the intake canal. We presume death was due to mechanical damage by impingement on the travelling screens. In the intake canal any resident menhaden would be expected to have been acclimated to the natural ambient temperature.

Dr. John Reintjes telephoned me this morning from Beaufort. He had been asked to prepare comments on the fish kill by a director of the NMFS in Newark. I summarized the above information for him over the telephone.

I would, of course, appreciate being kept advised of developments in this matter.

Sincerely yours,



Charles B. Wurtz

cc7 R. R. Younger
Resource Management, Inc.