

U.S. NUCLEAR REGULATORY COMMISSION  
OFFICE OF INSPECTION AND ENFORCEMENT  
REGION I

IE Inspection Report No: 50-219/75-05

Docket No: 50-219

Licensee: Jersey Central Power and Light Company

License No: DPR-16

Madison Avenue at Punch Bowl Road

Priority: \_\_\_\_\_

Morristown, New Jersey 07960

Category: C

Location: Oyster Creek, Forked River, New Jersey 08731

Safeguards Group: \_\_\_\_\_

Type of Licensee: BWR (GE) 1930 MW(t)

Type of Inspection: Special, Announced

Dates of Inspection: February 4 and 5, 1975

Dates of Previous Inspection: January 29-31, 1975

Reporting Inspector: Edward G. Greenman

2/20/75  
Date

Edward G. Greenman, Reactor Inspector

Accompanying Inspectors: Charles Gallina

2-19-75  
Date

Dr. Charles Gallina, Radiation Specialist

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\_\_\_\_\_  
Date

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\_\_\_\_\_  
Date

\_\_\_\_\_

\_\_\_\_\_  
Date

Other Accompanying Personnel: None

\_\_\_\_\_  
Date

Reviewed By: D. L. Caphton

2/20/75  
Date

D. L. Caphton, Senior Reactor Inspector, IE Branch

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SUMMARY OF FINDINGS

A. Items of Noncompliance

None identified

B. Deviations

None identified

Licensee Action on Previously Identified Enforcement Items

Not inspected

Design Changes

Not inspected

Unusual Occurrences

A. Unscheduled Shutdown

Reactor trip occurred on February 4, 1975 due to reactor low water level resulting from a loss of feedwater flow. (Details, 3a and 3c)

B. Fish Mortalities

Some signs of fish mortalities were evident subsequent to plant shutdown. Visible indications were slight. (Details, 4b and 4c)

Other Significant Findings

A. Current Findings

a. Fish Kill Procedure

The inspectors verified that licensee action with respect to potential or actual fish kills was taken in accordance with approved procedures. (Details, 4d)

b. Stack Monitor Readings

The inspectors verified stack release indications for the interval prior to and following the reactor trip occurring February 4, 1975 and which denoted no abnormal releases. (Details, 3b)

c. Fish Samples

The inspectors examined fish samples collected by the licensee following plant shutdown. (Details, 4b)

d. Operating Logs and Records

The inspectors reviewed plant logs and records associated with the shutdown. (Details, 2)

B. Unresolved Items

Reactor Trip Due to Loss of Feedwater Pumps

Cause of pump(s) trip was undetermined at the conclusion of this inspection. (Details, 3a and 3c)

C. Status of Previously Reported Unresolved Items

None closed

Management Interview

A management interview was conducted on February 5, 1975 with Mr. J. T. Carroll, Station Superintendent and Mr. E. J. Growney, Technical Engineer. Items discussed are summarized below:

A. General

The inspectors summarized the scope of the special inspection relative to circumstances surrounding the reactor trip which occurred February 4, 1975 and observations of licensee actions concerning a reported fish kill.

B. Fish Mortalities

The inspectors stated that based on direct observation, visual indications of any fish kill were slight.

A licensee representative stated that IE:I would be apprised of any change in status concerning evidence of fish mortalities. (Details, 4b and 4c)

C. Reactor Trip

The inspectors stated their understanding based on prior discussions with licensee representatives was that the cause of feedwater pump trip which resulted in a reactor low water level scram had not yet been determined.

A licensee representative acknowledged the inspectors statement and stated that evaluation was in progress. (Details, 3a)

## DETAILS

### 1. Persons Contacted

- a. Mr. J. T. Carroll, Station Superintendent
- b. Mr. D. A. Reeves, Chief Engineer
- c. Mr. J. P. Maloney, Operations Supervisor
- d. Mr. W. Baldwin, Manager - Environmental Projects (JCP&L)
- e. Mr. M. Roach, Environmental Scientist (JCP&L)
- f. Mr. E. J. Growney, Technical Engineer
- g. Mr. R. L. Stoudnour, Staff Engineer
- h. Mr. N. Cole, Shift Foreman
- i. Mr. G. Hicks, Shift Foreman
- j. Mr. B. J. Cooper, Shift Foreman
- k. Mr. W. Goodwin, Equipment Operator
- l. Mr. J. Russo, Chief, Bureau of Radiation Protection - Department of Environmental Protection, State of New Jersey

### 2. Logs and Records

The following logs and records were reviewed without comment and for the periods indicated:

- a. Station Log Book - February 4 and 5, 1975.
- b. Shift Foreman Log - February 4 and 5, 1975.
- c. Bridge Temperature Readings - February 4 and 5, 1975.
- d. Calculation Sheets for Determination of percent saturation of N<sub>2</sub> and Ar in water - February 5, 1975.
- e. Stack Monitor Channel A and B Readings - February 4 and 5, 1975.

### 3. Operations

#### a. Reactor Shutdown

Licensee records reviewed indicated an unscheduled shutdown occurred at 2:57 P.M. February 4, 1975. Reactor trip resulted from the loss of the three (3) reactor feedwater pumps. Cause of pump trip had not been determined at the conclusion of the inspection. A licensee representative stated that the events recorder trace indicated, low water level, scram discharge volume and turbine trip. Item is considered unresolved pending the licensee's evaluation. This shutdown preceded a scheduled shutdown planned for February 5.\*

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\*Scheduled outage to complete IE Bulletin 75-1 inspection requirements.

b. Stack Release Rates

The inspector verified by chart observation that no abnormal releases had occurred. The nominal release rate prior to shutdown was 36,000 uCi/sec and the reactor had been operating at 1877-1903 MW(t).

c. Shutdown Sequence

Discussion with licensee representatives and log books reviewed indicated a reactor shutdown sequence as follows:

- February 4, 1975:
- (1) Reactor feedwater pump(s) trip (3 pumps)
  - (2) Reactor Scram 2:57 P.M. low water level trip
  - (3) Feedwater pumps 1-1 and 1-2 recovered
  - (4) Two running dilution pumps tripped (licensee action)
  - (5) The 1-1 circulating water pump was tripped (licensee action)
  - (6) Turbine trip
  - (7) Normal cooldown rate initiated at approximately 60°/hour.

4. Environmental

a. Canal Temperatures

The inspector reviewed temperature recorder readings for February 4 and 5, 1975 which indicated the following:

	<u>Influent</u>	<u>Effluent</u>	<u>Effluent</u> (US Route 9 Bridge)
February 4, 1975-2:57 P.M.	36°F	57°F	42-44°F
6:00 P.M.	34°F	36°F	36-38°F
February 5, 1975-7:30 A.M.	—	—	34-37°F

The inspector was additionally apprised that temperature expected at Barnegat Bay was approximately 45°F.\*

\*Telephone contact February 5, 1975-U.S. Weather Service

b. Fish Mortalities

The inspector's met with licensee representatives on the evening of February 4, 1975 to review circumstances surrounding the reactor trip and to further discuss licensee observations related to indications of a fish kill which had occurred earlier in the day. (Paragraph 3 and 4a provide data on the shutdown, mode of circulating and dilution pump operation and temperature readings. Discussions with involved licensee personnel indicated that following the plant shutdown, some fish were observed in distress. Purportedly, local fisherman removed two buckets containing bluefish. Licensee estimates of the total number of fish involved varied and included up to 200 bluefish to 1,000-2,000 total fish, including menhaden. The inspectors were unable to determine the validity of these numbers based on distressed and dead fish observed during the inspection.

The inspectors examined fish samples obtained by the licensee on February 4, 1975, which included approximately one dozen winter bluefish (9-12 inches-forked length) and two dozen menhaden (varying in size from 8-14 inches-forked length).

c. Canal Observations

On February 4, 1975 at approximately 11:45 P.M. the inspectors toured the discharge canal area in the vicinity of the U.S. Route 9 bridge. Two menhaden were observed in distress and a total of four dead menhaden were counted. A return to this area at 12:30 A.M. February 5, 1975 showed no change in status or observations. At 5:30 A.M. only two dead menhaden were sighted.

A subsequent tour of the discharge canal area, one marina and lagoon areas resulted in sighting of one dead menhaden.

From approximately 9:30 to 11:00 P.M. the inspectors toured the discharge canal by boat from the plant to the lagoons near the point where the plant effluent empties into Barnegat Bay. A total of six dead menhaden were observed in back waters, no distressed fish were sighted, relatively little gull activity was noted and no menhaden were observed schooling in any areas thus examined.

At the conclusion of the inspection status remained unchanged. No visible evidence of a fish kill of large proportions was noted. Licensee representatives also reported that trawls resulted in only two fish located in one of the lagoons. One of these fish was reported to show no distress indications.

d. Procedural Coverage

The inspector verified that licensee actions were in accordance with procedure 1202.7, Revision 0, dated October 24, 1974 which covered actions to be taken in event of an actual or potential fish kill.