Jersey Central Power & Light Company

MADISON AVENUE AT PUNCH BOWL ROAD • MORRISTOWN, N. J. 07960 • 201-539-6111

MEMBER OF THE General GPU ELECTRIC AND GAS COMPANIES SYSTEM Public Utilities Corporation

February 13, 1975

Mr. A. Giambusso
Director, Division of Reactor Licensing
Office of Nuclear Reactor Regulation
United States Nuclear Regulatory Commission
Washington, D. C. 20545

Dear Mr. Giambusso:

Subject: Oyster Creek Station
Docket No. 50-219
Abnormal Occurrence Report No. 50-219/75-2

The purpose of this letter is to forward to you the attached Abnormal Occurrence Report in compliance with paragraph 6.6.2.a of the Technical Specifications.

Enclosed are forty copies of this submittal.

Very truly yours,

Donald A. Ross

Donald A. Ross
Manager, Generating Stations-Nuclear

cs
Enclosures

cc: Mr. J. P. O'Reilly, Director
Office of Inspection and Enforcement, Region 1

50-219 incident

1715

COPY SENT REGION I

Jersey Central Power & Light Company

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MEMBER OF THE General Public Utilities Corporation GPU SYSTEM

OYSTER CREEK NUCLEAR GENERATING STATION
FORKED RIVER, NEW JERSEY 08731

Abnormal Occurrence
Report No. 50-219/75-2

Report Date

February 13, 1975

Occurrence Date

February 6, 1975

Identification of Occurrence

Violation of the Technical Specifications. Approximately 4,000 gallons of condensate was inadvertently released to the discharge canal in an uncontrolled manner. This event is considered to be an abnormal occurrence as defined in the Technical Specifications, paragraph 1.15C.

Conditions Prior to Occurrence

Reactor mode switch in refuel position with reactor coolant temperature approximately 150°F.

Description of Occurrence

On February 5, 1975, at approximately 1100 hours, the hotwell of "B" condenser was flooded in order to search for tube leaks in the north and south water boxes. As part of this operation, it is required to drain the water boxes in preparation for personnel access. This is accomplished by "cracking" the backwash discharge valves (one per water box) and opening the water box vent valves. The backwash discharge valves were not returned to the closed position prior to flooding the hotwells. Because of the unexpected magnitude of tube leakage, the condensate in the hotwell flowed into the water boxes and out the backwash valves to the discharge tunnel at an estimated rate of 3 gpm. This condition existed until approximately 0930 on the following day, at which time maintenance personnel entered the north side water box to search for tube leaks. They plugged approximately 33 leaking tubes which reduced the leakage rate to approximately 1 gpm. The observed leakage rate in the south side water box was very small

and did not contribute significantly to the release. The release to the discharge tunnel continued at this rate until 1430 hours at which time the significance of the event was realized, and the backwash discharge valves were closed. Water samples were immediately collected from the intake and discharge structure, discharge canal prior to dilution with Oyster Creek, and discharge canal after dilution with Oyster Creek at the Route 9 bridge.

In addition, samples of condensate were analyzed from:

1) Condensate pump discharge (water from "A" and "C" condenser hotwells)

2) North side of "B" condenser hotwell

3) South side of "B" condenser hotwell

The highest radionuclide concentrations found in the south side of the "B" hotwell were used for the release estimates in Attachment I. Attachment II shows results of isotopic analyses of the discharge canal water performed by the environmental sample analysis vendor.

There were two service water pumps, each with a capacity of 6,000 gpm, in service throughout the release providing dilution flow. One pump discharges into the circulating water discharge tunnel, the other pump discharges into the canal between the discharge structure and the Route 9 bridge.

Apparent Cause of Occurrence

Plant operating procedures did not preclude this specific occurrence.

Analysis of Occurrence

Calculations and analysis results shown in Attachments I and II demonstrate that the concentrations of effluents released from the site were less than the MPC given in Appendix B, Table II, Column 2 of 10CFR20 and Notes 1 through 5 thereto.

Corrective Action

The backwash discharge valves were closed and the water remaining in the water boxes was pumped to the radwaste facility. Following the collection of canal samples, a dilution pump was started to flush the discharge canal. Revisions will be made to plant operating procedures to prevent a recurrence of this type violation.

Failure Data

Not applicable.

ATTACHMENT I

Release Calculations Based on Condensate Analysis from "B" Hotwell South Side Sampled February 7, 1975 at 2000

Isotope	Conc. (μCi) / (ml)	Discharge[1] Tunnel Conc. (μCi) / (ml)	Maximum[2] Canal Conc. (μCi) / (ml)	MPC μCi / ml	Conc. ÷ 10CFR20 Limit[3]
I^{131}	4.4×10^{-4}	2.2×10^{-7}	1.1×10^{-7}	3×10^{-7}	.37
I^{133}	3×10^{-5}	1.5×10^{-8}	7.5×10^{-9}	1×10^{-6}	.0075
Xe^{133}	2.35×10^{-4}	-	-	-	-
Xe^{135}	2×10^{-6}	-	-	-	-
Ba^{140}	3.5×10^{-5}	1.75×10^{-8}	8.75×10^{-9}	3×10^{-5}	.0003
La^{140}	4.1×10^{-5}	2.05×10^{-8}	1.03×10^{-8}	2×10^{-5}	.0005
	$\Sigma = 3.35 \times 10^{-4}$				$\Sigma = .378$

[1]Assumes 6,000 gpm flow and 3 gpm leak; exclusive of noble gas and strontium (concentration calculated in discharge tunnel).
[2]Assumes 12,000 gpm flow (from two service water pumps) and neglecting dilution in discharge canal volume.
[3]Reconcentration factor not used; based on maximum possible canal concentration.

Volume = 22.5 hr. X 60 X 3 g/min = 4.05×10^3 gal

Activity = 4.05×10^3 gal. X 3785 $\frac{cc}{gal.}$ X 3.35×10^{-4} = 5.13×10^3 μCi

Canal Concentration (max.) = 37.8% of 10CFR20 Limit

ATTACHMENT II

Canal Concentrations Measured in Samples Following Release
These Samples Were Analyzed by the Environmental Sample Analysis Vendor

Location	I^{131} µCi/cc	Cs^{137} µCi/cc	Mn^{54} µCi/cc	Co^{60} µCi/cc	K^{40} µCi/cc	La^{140} µCi/cc	Ba^{140} µCi/cc
Intake	1.9×10^{-8}	2.1×10^{-9}	9.4×10^{-9}	9.1×10^{-9}	1.3×10^{-9}	7.0×10^{-9}	*
Outlet of Discharge Tunnel	1.5×10^{-7}	4.1×10^{-9}	4.8×10^{-9}	5.9×10^{-9}	1.7×10^{-9}	2.5×10^{-8}	3.0×10^{-9}
Between Discharge & Rt. 9 Bridge	1.7×10^{-9}	*	*	*	*	*	*
Between Discharge & Rt. 9 Bridge	1.3×10^{-9}	*	*	*	3.2×10^{-8}	*	*
Rt. 9 Bridge	3.2×10^{-9}	3.4×10^{-9}	1.2×10^{-8}	1.1×10^{-8}	5.1×10^{-8}	*	*

*Not detected