Jersey Central Power & Light Company

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

MEMBER OF THE General GPU ELECTRIC POWER COMPANIES Public Utilities Corporation SYSTEM

May 29, 1974

Mr. A. Giambusso
Deputy Director for Reactor Projects
Directorate of Licensing
United States Atomic Energy Commission
Washington, D. C. 20545

Dear Mr. Giambusso:

Subject: Oyster Creek Station
Docket No. 50-219
Abnormal Occurrence Report No. 50-219/74/31

The purpose of this letter is to forward to you the attached Abnormal Occurrence Report in compliance with paragraph 1.15B of the Technical Specifications.

Enclosed are forty copies of this submittal.

Very truly yours,

Donald A. Ross
Manager, Nuclear Generating Stations

cs
Enclosures

cc: Mr. J. P. O'Reilly, Director
Directorate of Regulatory Operations, Region I

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OYSTER CREEK NUCLEAR GENERATING STATION
FORKED RIVER, NEW JERSEY 08731

Abnormal Occurrence
Report No. 50-219/74/31

Report Date

May 29, 1974

Occurrence Date

May 19, 1974

Identification of Occurrence

Inoperability of two Bergen-Paterson hydraulic shock and sway arrestors located on Core Spray System II and on Containment Spray System I in the reactor building. This event is considered to be an abnormal occurrence as defined in the Technical Specifications, paragraph 1.15D.

Conditions Prior to Occurrence

The plant was shut down for refueling.

Description of Occurrence

During an inspection of the snubbers in the reactor building, two inoperable units and five leaking units, all Bergen-Paterson Type HSSA-10, were found. The defective snubbers were identified as follows:

Unit	System	Condition	Elevation
477287	Containment Spray I	Inoperable	-19'
469873	Containment Spray II	Leaking	23'
469903	Shutdown Cooling	Leaking	51'
469846	Core Spray II	Leaking	75'
469855	Core Spray II	Inoperable	75'
487465	B Emergency Cond.	Leaking	75'
477170	A Emergency Cond.	Leaking	75'

Apparent Cause of Occurrence

The cause of this occurrence is attributed to seal failure. The inoperability of the snubbers was due to a loss of the hydraulic fluid. The core spray unit had never been rebuilt with ethylene propylene (EP) seals. The containment spray

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unit had been partially rebuilt with EP material following an inspection on February 28, 1974. The particular snubber series involved cannot be fully rebuilt with EP material. Several seals peculiar to the series are no longer fabricated by the snubber manufacturer.

Analysis of Occurrence

The safety significance of this occurrence was a partial loss of the seismic restraining ability for the affected systems. Had the plant suffered a design basis earthquake, the probability that these systems would have suffered structural damage was increased.

Corrective Action

The immediate corrective action was to replace the seven faulty units with units which are equipped with EP seals and have been pressure tested to 4000 psig.

The monthly inspection of all hydraulic snubbers located outside of the primary containment will be adhered to regardless of plant status. Those units which require maintenance and are found to contain other than EP seals will, to the extent possible, be replaced with units having all EP seals. Eventually, any unit which cannot be fully equipped with EP seals will be retired.

The Generation Engineering Department is currently evaluating mechanical snubbers as possible replacements for hydraulic snubbers.

Failure Data

Manufacturer: Bergen-Paterson
Type: HSSA-10

To: James P. O'Reilly
Directorate of Regulatory Operations
Region I
631 Park Avenue
King of Prussia, Pennsylvania 19406

From: Jersey Central Power & Light Company
Oyster Creek Nuclear Generating Station, Docket #50-219
Forked River, New Jersey 08731

Subject: Abnormal Occurrence Report No. 50-219/74/32

The following is a preliminary report being submitted in compliance with the Technical Specifications paragraph 6.6.2.

Preliminary Approval:

J. T. Carroll, Jr. 5/22/74
Date

cc: Mr. A. Giambusso

B/533

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Initial Telephone Report Date: 5/22/74

Date of Occurrence: 5/21/74

Initial Written Report Date: 5/22/74

Time of Occurrence: 1100

OYSTER CREEK NUCLEAR GENERATING STATION
FORKED RIVER, NEW JERSEY 08731

Abnormal Occurrence
Report No. 50-219/74/32

IDENTIFICATION OF OCCURRENCE:

Violation of the Technical Specifications, paragraph N/A, It was observed that the RV40D core spray booster pump pressure switch failed in the permissive position. This created a condition whereby had core spray booster pump NZ03B failed to start or failed to establish a discharge pressure of 230 psig its associated redundant booster pump, NZ03D, would not have started automatically.

This event is considered to be an abnormal occurrence as defined in the Technical Specifications, paragraph 1.15D.

CONDITIONS PRIOR TO OCCURRENCE:

____	Steady State Power	____	Routine Shutdown Operation
____	Hot Standby	____	Load Changes During Routine Power Operation
____	Cold Shutdown	____	Other (Specify)
X	Refueling Shutdown		
____	Routine Startup Operation		

Reactor mode switch in REFUEL with the reactor cavity flooded.

DESCRIPTION OF OCCURRENCE:

While performing the annual surveillance test of the auto-depressurization initiation logic with the System I core spray system disabled, it was observed that a relay, 1K114D in the System II core spray booster pump initiation logic, was in the energized position. An investigation indicated that the System II core spray booster pump discharge pressure switch, RV40D, which actuates this relay was in the closed position. The switch

normally closes when the booster pump discharge pressure comes up to at least 230 psig, thereby energizing the 1K114D relay. Normally closed contacts from the 1K114D relay act in conjunction with the 1K114B relay and RV40B pressure switch to trip the NZ03B booster pump and start the redundant NZ03D booster pump if the pump does not come up to 230 psig after five seconds. Failure of the switch in the closed position created a condition whereby NZ03B would not have tripped if it failed to start or establish sufficient discharge pressure and pump NZ03D would not have started since the logic was failed in the "satisfied" position.

It should be noted that this failure occurred subsequent to the April 12 plant shutdown since auxiliary contacts from this relay actuate an alarm in the station control room which was not observed during power operation. When the plant is in the cold shutdown condition, this alarm is normally on because it is a common alarm for the 285 psig permissive switch, RE17, for the core spray parallel injection valves. Since the reactor was fully depressurized, this switch was closed and the alarm was on.

APPARENT CAUSE OF OCCURRENCE:

_____ Design	_____ Procedure
_____ Manufacture	_____ Unusual Service Condition
_____ Installation/ Construction	_____ Inc. Environmental
_____ Operator	_____ Component Failure
	_____ Other (Specify)

The cause of this occurrence is presently under investigation.

ANALYSIS OF OCCURRENCE: The safety significance of this event is considered to be minimal since the reactor was in the shutdown condition with the cavity flooded. Had a LOCA occurred in this condition, the System II core spray pumps which operated satisfactorily would have delivered core spray flow at rated capacity but at a lower discharge pressure, assuming the booster pump failed to start.

CORRECTIVE ACTION: The 16K114D relay was placed in the deenergized position which is the tripped condition. In this configuration, RV40B would have acted to sense improper booster pump discharge pressure and started the redundant pump.

FAILURE DATA: MERCOID Pressure Switch
Type DAW43-156 R21E

Prepared by: Arthur H Kuhn Date: 5/22/74