

# Jersey Central Power & Light Company

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

August 6, 1973



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  
Hydraulic Shock and Sway Arrestor Failure

The purpose of this letter is to formally submit in writing our Summary Report, dated July 16, 1973, on Snubber Repair Activities during the 1973 Oyster Creek Refueling Outage. This report was sent to your office earlier in a preliminary form. This report is also responsive to Items B.2.a to c inclusive in your R. O. Bulletin No. 73-3, dated July 27, 1973. Also in answer to Item B.2.c all units are of the same model identification, HSSA-10.

In addition we wish to advise in writing that the plant experienced the failure of eight Hydraulic Shock and Sway Arrestor units located on the Emergency Condenser, Core Spray, Main Steam, Feedwater, and Shutdown Cooling system in the drywell. This event is considered to be an abnormal occurrence as defined in the Technical Specifications, paragraph 1.15d. Notification of this event, as required by the Technical Specifications, paragraph 6.6.2.a, was made to AEC Region I, Directorate of Regulatory Operations, by telephone on Friday, July 27, 1973, at 10:00 a.m.

The plant was shutdown on July 21, 1973 because of high unidentified leakage in the drywell. It was decided at this time to perform an inspection on the drywell snubbers which had been rebuilt during the Spring outage. It was discovered that eight of the sixty-two drywell snubbers were missing hydraulic fluid in varying amounts, thereby resulting in their inoperability. The units involved are tabulated below by serial number and location:

8305120256 730806  
PDR ADOCK 05000219  
S PDR

*Handwritten: 50219*  
COPY SENT REGION *[Signature]*

6097

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<u>Serial Number</u>	<u>Location</u>
487491	Shutdown Cooling
487495	Core Spray
487499	Emergency Condenser
487516	Shutdown Cooling
487557	North Feedwater
487561	Emergency Condenser
487562	Emergency Condenser
487574	Emergency Condenser

The oil loss has been attributed to seal failure creating a leakage path. The exact mechanism of seal failure is presently under investigation by Disogrin Company, Bergen Paterson and Rex Hanna. Based on discussion with Bergen Paterson and Rex Hanna at the Oyster Creek site on August 2, two points were recognized. Both of the silicone base radiation resistant fluids (SF1017 and SF1154) possess an aromatic constituent in their chemical make-up which is capable of replacing out a plasticizer in the soft millable gum polyurethane seals. Loss of the plasticizer cause both a reduction in seal volume and a loss in seal effectiveness. It is believed that prolonged exposure at elevated temperatures is a factor in this oil attack on the seals. This point is amplified by noting the location of the recent failures, six of which were above the biological shield where drywell temperatures are the greatest.

Corrective action was taken by replacing the failed units with eight new spares.

The significance of this type failure is in the event of a design bases earthquake no credit could have been taken for the seismic restraining ability of the failed units, the probability was increased that the piping systems affected would go into resonant vibration and possibly fail.

The following surveillance schedule is proposed:

1. Inspect all drywell snubbers as made available by scheduled or forced shutdowns requiring deinerting of the drywell, excepting shutdowns that occur within a four week period.
2. We will inspect all drywell snubbers within six weeks from July 28, 1973. Future surveillance schedules will be based on the results of this inspection. Our intentions will be made known to the Commission in a timely manner.
3. The snubber inspection will consist of the following:
  - a) Hydraulic fluid level check
  - b) Inspection of piston rod for scratches to indicate possible misalignment between the rod and outboard bearing

Mr. Giambusso

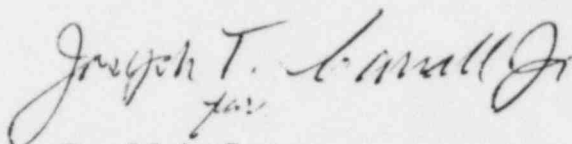
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c) Check to see if eyebolt nut is loose, which would indicate unit is free to move.

Enclosed are forty (40) copies of this report.

Very truly yours,



Donald A. Ross  
Manager, Nuclear Generating Stations

DAR/pd  
Enclosures

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