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 SYSTEM Public Utilities Corporation

December 7, 1973

RECEIVED DEC 13 73 U.S. ATOMIC ENERGY COMMISSION REGULATORY MAIL SECTION

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 Inspection

The purpose of this letter is to submit our Summary Report on the inspection and repair activities conducted on hydraulic shock and sway arrestors (snubbers) during the September 1973 shutdown of the Oyster Creek Nuclear Generating Station. The report is responsive to the inspection and reporting requirements of Regulatory Operations Bulletin 73-4 dated August 17, 1974.

During the plant shutdown which began on September 8, 1973, a total of 167 snubbers (142 Bergen Paterson and 25 Grinnel) were inspected and repaired as necessary to restore them to a satisfactory operable condition. The location and the details pertaining to the as found condition, rework and test for each snubber is given in the Summary Report. The material used for replacement seals in the reworked snubbers was, for the most part, molded polyurethane. Seals of viton and ethylene propylene were used in small quantities. Ethylene propylene has recently gained favor as the best seal material for snubbers, but seals made of this material were not available except for some "O" rings during the maintenance period. Replacement seal kits made of ethylene propylene have since been received at the plant and will be used for future snubber repairs.

In view of the high failure rate that has been experienced with snubbers, the following surveillance program will be followed until such time that confidence is restored in their reliability:

Reactor Building Snubbers

1. Monthly inspection of the fluid levels of the seventy-seven snubbers in the reactor building.

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2. Monthly inspection of the general physical condition (i.e. rod freedom and rod scratches) of ten selected units. The ten selected will change with each inspection.

3. Bi-monthly disassembly and seal inspection of two selected units.

4. Those units leaking oil severely or found to be failed will be removed and inspected, not withstanding "3" above. Ethylene propylene seals will be used to rebuild these units.

Snubbers Inaccessible During Operation

1. Snubbers which are in the drywell or otherwise inaccessible during reactor operation, will be inspected whenever the reactor is shut down for twenty-four hours or longer and snubbers have not been inspected for thirty days. In no event, will the interval between inspections exceed 120 days.

2. Defective units will be repaired or replaced before returning to power. Ethylene propylene seals will be used in the rebuilt units.

Enclosed are forty copies of this report.

Very truly yours,

Donald A. Ross

Donald A. Ross
Manager, Nuclear Generating Stations

cs
Enclosures

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

Mr. D. J. Skovholt
Assistant Director for Operating Reactors

Jersey Central Power & Light Company

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November 13, 1973

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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

This letter serves to report a failure of one (1) hydraulic shock and sway arrestor unit (HSSA) on the steam line for isolation condenser NE01B. found while performing a monthly check of all units in the reactor building external to the drywell, as recommended by the Plant Operations Review Committee. This event is considered to be an abnormal occurrence as defined in the Technical Specifications, paragraphs 1.15B and D. 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 Saturday, November 3, 1973, and by telecopier on Monday, November 5, 1973.

While conducting an inspection of the hydraulic shock and sway arrestors (snubbers) located on various systems in the reactor building, but outside of the drywell, the accumulator on one unit on the steam line to the "B" isolation condenser was found to be devoid of fluid.

Additionally, another unit on the steam line to the "A" isolation condenser was initially reported to be failed, but further inspection and evaluation by the mechanical maintenance foreman and the maintenance engineer resulted . the unit being considered to be operable but low in accumulator fluid level

Upon disassembly and inspection of the accumulator installed on the "B" isolation condenser, the spring loaded piston ring was found to be failed. Although no deterioration or other unusual conditions could be visually determined, the U-cup on the accumulator piston head apparently was degraded to a point where it allowed the fluid to leak out. The unit had not been rebuilt during either the Spring 1973 Refueling/Turbine Generator Inspection nor during the September 1973 Snubber/Turbine Control Valve Outage.

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Pertinent data is as follows:

Manufacturer: Bergen Paterson Pipe Support Company
Type: HSSA-10
Serial No.: 469946

The initial inspection report indicated that one unit on the steam line for the "A" isolation condenser and one unit on the "B" isolation condenser were inoperable. Consequently, as per the requirements of the Technical Specifications, paragraph 3.8.D, an orderly plant shutdown was commenced upon notification of the situation. Meanwhile, an immediate reinspection was made on both snubbers with results as previously indicated. Nevertheless, preparations for an orderly shutdown continued until the accumulator for the snubber on the "A" isolation condenser could be filled to a satisfactory level. This action was completed by 1845 Friday, November 2, 1973. The load drop which had been started was halted, and the plant returned to its previous operating level of 595 MWe(g). Follow-up action included replacement of the accumulator on the snubber installed on the "B" isolation condenser steam line, then replacement of the entire snubber unit on the "A" isolation condenser steam line, since it had been leaking. This action was completed by 1910 Friday evening. A follow-up check was then made on Saturday evening to insure that no further fluid loss was occurring.

Amendment 67 to the FDSAR details the requirements for at least one isolation condenser to be available as a heat sink in the event of a loss of coolant accident. Both condensers would have been able to perform this function; however, had an earthquake occurred which would have required proper functioning of all installed snubbers, the steam line to the "B" condenser may not have been able to withstand the anticipated forces. Consequently, should a rupture then have occurred, a release of reactor steam to the secondary containment would have resulted. Analysis of this accident has been made assuming a valve closure time of 60 seconds after the break, and found to be less severe than a rupture of the main steam line and subsequent closure of the main steam isolation valves. The significance of this event then is the increased probability of steam release to the secondary containment which, had that occurred with subsequent unit isolation, then would have resulted in a loss of redundancy of the isolation condensers to act as a heat sink.

In lieu of waiting an additional month to reinspect snubbers located in the reactor building, this reinspection will be conducted within the next two weeks. Based upon the inspection findings, a determination will be made as to an acceptable future inspection frequency.

In addition, four snubbers previously not included in the inspection program, two of which are located on the No. 2 containment spray system and two on the No. 1 core spray system, will be inspected promptly and will be included in subsequent inspections.

It is further intended that the ethylene propylene seal procurement effort be continued such that any units rebuilt in the future would contain seals of this material.

Enclosed are forty (40) copies of this report.

Very truly yours,

Donald A. Ross

Donald A. Ross
Manager, Nuclear Generating Stations

DAR:cs
Enclosures

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