

OYSTER CREEK NUCLEAR GENERATING STATION
Forked River, NJ 08731

Licensee Event Report Update
Reportable Occurrence No. 50-219/83-22/03-1

Report Date

January 23, 1985

Occurrence Date

October 14 and 27, 1983

Identification of Occurrence

Operation in a degraded mode permitted by a limiting condition for operation (Section 3.5.A.8.d) when two (2) mechanical snubbers were found to be inoperable during Stroke testing as required by I.E. Bulletin 81-01. These snubbers are located on the Main Steam System and the Core Spray System.

This event is considered to be a Reportable Occurrence as defined in the Technical Specifications paragraph 6.9.2.d.2.

Conditions Prior to Occurrence

The plant was in the refuel mode with the reactor vessel flooded and the core completely off-loaded.

Description of Occurrence

During the period of September 20 through November 1, 1983, 91 mechanical snubbers were manually stroke-tested in accordance with I.E. Bulletin 81-01.

This stroke test consisted of manually stroking the snubber over the range of the stroke in both tension and compression to verify freedom of movement. During this testing, two snubbers (N-1-5, Main Steam System/N-20-4, Core Spray System) would not move when stroked and this constituted a failure under the criteria of freedom of movement over the range of stroke. Additionally, the mounting hardware for snubber N-1-5 was noted to be in a degraded condition. Both snubbers were located in areas inaccessible during operation.

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Apparent Cause of Occurrence

The two snubbers were sent to a laboratory for disassembly and inspection. Snubber N-1-5 disassembly revealed slight wearing of the capstan spring and corrosion of the moving parts - screw shaft, inertia mass, and torque drum. The failure was attributed to impaired movement capability due to the internal corrosion. Disassembly of snubber N-20-4 revealed corrosion on the screw shaft, inertia mass, and the inside of the housing and also a bent screw shaft-ball screw assembly; the ball screw assembly would move only a few inches on the screw shaft from full retraction before locking up due to the bend in the shaft. This snubber was found to be in contact (interference) with an adjacent snubber, and the thermal movement of the two assemblies created a side loading that resulted in the bent screw shaft. The cause of the corrosion was attributed to a leaking pilot valve on the Electromatic Relief Valve (EMRV) installed on the Main Steam Header directly above snubber N-1-5. Snubber N-20-4 is located approximately fifteen feet above the EMRV.

Analysis of Occurrence

Snubbers are designed to prevent unrestrained pipe motion under dynamic loads as might occur during an earthquake or severe transient while allowing normal thermal motion during startup and shutdown. The consequence of an inoperable snubber is an increase in the probability of structural damage to piping as a result of a seismic or other event initiating dynamic loads.

Since these snubbers may have been inoperable during plant operation, they may not have been able to perform their intended function. Structural damage to the piping systems could have resulted had a seismic event or severe transient taken place.

Corrective Action

The two failed snubbers were replaced with new operable replacement units. The mounting hardware for snubber N-1-5 was repaired and re-used. The pipe clamp for snubber N-20-4 was relocated to relieve the interference with the adjacent snubber assembly.

The attributed source of the moisture that caused the internal corrosion of both snubbers was repaired (leaking EMRV pilot valve).

Both failures have subsequently been analyzed and determined to have had negligible effect on the piping systems and the plant, and at no time was the piping overstressed in this condition.

Failure Data

Manufacturer: Pacific Scientific
Mode: PSA-11 Mechanical Snubber
Part No. 1801107-01
Serial No.: Snubber N-1-5, 104 Snubber N-20-4, 160
Rating: 11 kips
Stroke: 6"

LICENSEE EVENT REPORT

CONTROL BLOCK: _____ (PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

01 | N | J | 0 | C | P | 1 | 1 | 2 | 0 | 10 | 1 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 4 | 1 | 1 | 1 | 1 | 1 | 4 | 5
7 8 9 14 15 25 26 30 37 38

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01 | REPORT SOURCE | L | 6 | 0 | 1 | 5 | 0 | 10 | 0 | 2 | 1 | 9 | 7 | 1 | 10 | 1 | 4 | 8 | 3 | 8 | 0 | 1 | 2 | 3 | 18 | 15 | 9
7 8 60 61 65 66 74 75 80

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES 10

07 | While performing stroke tests on all installed mechanical snubbers
03 | two (2) snubbers were demonstrated to be inoperable. As a result
04 | of inoperable snubbers the Main Steam and Core Spray System might
05 | have been in a degraded condition during a seismic event.
06 |
07 |
08 |

09 | SYSTEM CODE: X | X | 11 | CAUSE CODE: B | 17 | CAUSE SUBCODE: C | 13 | COMPONENT CODE: S | L | U | P | O | R | I | T | 14 | COMP SUBCODE: D | 15 | VALVE SUBCODE: E | 16 |
17 | LE/R/O REPORT NUMBER: 8 | 3 | 21 22 | SEQUENTIAL REPORT NO.: 0 | 2 | 2 | 24 25 | OCCURRENCE CODE: 0 | 3 | 28 29 | REPORT TYPE: X | 30 | REVISION NO.: 1 | 32 |
ACTION TAKEN: C | 33 | FUTURE ACTION: E | 34 | EFFECT ON PLANT: E | 35 | SHUTDOWN METHOD: E | 36 | HOURS: 0 | 0 | 0 | 37 38 | ATTACHMENT SUBMITTED: Y | 39 | NPRO-4 FORN SUPPLIER: Y | 40 41 | PRIME COMP. SUPPLIER: A | 42 | COMPONENT MANUFACTURER: _____

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS 27

10 | Snubber N-1-5 disassembly revealed slight wearing of the capstan spring
11 | and corrosion of the moving parts. Failure was attributed to impaired
12 | movement capability. Snubber N-20-4 also revealed internal corrosion
13 | due to a leaking pilot valve on the EMRV. Both were replaced with
14 | new operable replacement units.

15 | FACILITY STATUS: H | 28 | % POWER: 0 | 0 | 0 | 29 | OTHER STATUS: _____ 30 | METHOD OF DISCOVERY: _____ 31 | DISCOVERY DESCRIPTION: Stroke Test 32 |

16 | ACTIVITY CONTENT RELEASED OF RELEASE: _____ 33 | AMOUNT OF ACTIVITY: N/A 34 | LOCATION OF RELEASE: N/A 35 |

17 | PERSONNEL EXPOSURES NUMBER: 0 | 0 | 0 | 37 | TYPE: _____ 38 | DESCRIPTION: N/A 39 |

18 | PERSONNEL INJURIES NUMBER: 0 | 0 | 0 | 40 | DESCRIPTION: N/A 41 |

19 | LOSS OF OR DAMAGE TO FACILITY TYPE: _____ 42 | DESCRIPTION: N/A 43 |

20 | PUBLICITY ISSUED DESCRIPTION: _____ 44 | N/A 45 |



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Writer's Direct Dial Number:

January 23, 1985

U.S. Nuclear Regulatory Commission
Document Control Desk
Washington, DC 20555

Dear Sir:

Subject: Oyster Creek Nuclear Generating Station
Docket No. 50-219
Licensee Event Report
Reportable Occurrence No. 83-22/03X Rev. 1

This letter forwards three (3) copies of Licensee Event Report 50-219/83-22/03X. As required by 10 CFR 50.73, this follow-up LER is forwarded to you in the format in which it was originally submitted in 1983.

Very truly yours,

Peter B. Fiedler
Vice President and Director
Oyster Creek

PBF/BH/dam
Enc.

cc: Dr. Thomas E. Murley, Administrator
Region I
U.S. Nuclear Regulatory Commission
631 Park Avenue
King of Prussia, PA 19406

NRC Resident Inspector
Oyster Creek Nuclear Generating Station
Forked River, NJ 08731

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