



GPU Nuclear Corporation

Post Office Box 388
Route 9 South
Forked River, New Jersey 08731-0388
609 971-4000
Writer's Direct Dial Number:

C321-94-2020
February 10, 1994

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

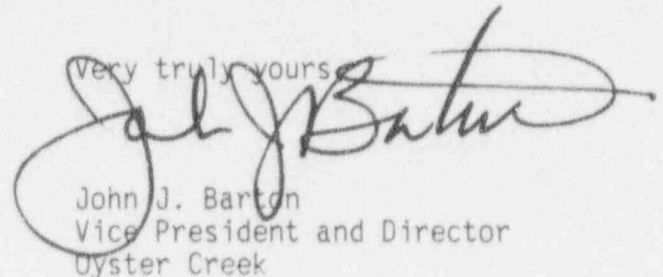
Dear Sir:

Subject: Oyster Creek Nuclear Generating Station
Docket No. 50-219
Licensee Event Report

This letter forwards one (1) copy of Licensee Event Report 94-001.

Should you have any questions, please contact Mr. Terry Sensue, Oyster Creek Licensing Engineer at 609-971-4893.

Very truly yours,



John J. Barton
Vice President and Director
Oyster Creek

JJB/TS:jc

cc: Administrator, Region 1
Senior NRC Resident Inspector
Oyster Creek NRC Project Manager

220042

9403030118 940210
PDR ADDCK 05000219
R PDR

JEFF

LICENSEE EVENT REPORT (LER)

U.S. NUCLEAR REGULATORY COMMISSION
APPROVED BY OMB NO. 3150-0104
EXPIRES 5/31/95

FACILITY NAME (1) Oyster Creek, Unit 1 DOCKET NUMBER (2) 05000219 PAGE (3) 1 OF 3

TITLE (4) Core Spray Piping Exceeding the Code Allowable Stresses Due to Original Design Deficiency

EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
01	13	94	94	001	00	02	10	94	FACILITY NAME	DOCKET NUMBER

OPERATING MODE (9)	N	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)								
POWER LEVEL (10)		20.402(b)		20.405(c)		50.73(a)(2)(iv)		73.71(b)		
		20.405(a)(1)(i)		50.36(c)(1)		50.73(a)(2)(v)		73.71(c)		
		20.405(a)(1)(ii)		50.36(c)(2)		50.73(a)(2)(vii)		OTHER		
		20.405(a)(1)(iii)		50.73(a)(2)(i)		50.73(a)(2)(viii)(A)		Specify in Abstract below and in Text, NRC Form 366A		
		20.405(a)(1)(iv)	X	50.73(a)(2)(ii)		50.73(a)(2)(viii)(B)				
	20.405(a)(1)(v)		50.73(a)(2)(iii)		50.73(a)(2)(x)					

LICENSEE CONTACT FOR THIS LER (12)
 NAME: Sylvain L. Schwartz, Mech. Eng. Sr. II TELEPHONE NUMBER (Include Area Code) 609-971-4558

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)										
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS

SUPPLEMENTAL REPORT EXPECTED (14)
 X YES (If yes, complete EXPECTED SUBMISSION DATE). NO EXPECTED SUBMISSION DATE (15) 09 01 94

During the design process of a Core Spray piping modification, it was discovered that the Core Spray System 1 minimum recirculation piping existing configuration does not meet the seismic and thermal expansion criteria allowables specified in the UFSAR. The root cause of this condition was the inadequacy of the original design.

The safety significance is considered to be minimal, since the existing configuration meets the ASME Section III allowable seismic and thermal expansion criteria and satisfies the operability limits.

The Core Spray System 2 minimum recirculation piping existing configuration is presently being reviewed by Engineering. A supplement to this report will be submitted following completion of this review.

A modification in accordance with the integrated living schedule will change the subject piping configuration to meet the UFSAR commitments.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
Oyster Creek, Unit 1	05000219	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	2 OF 3
		94	001	00	

DATE OF DISCOVERY

The condition described in this report was identified on January 13, 1994.

IDENTIFICATION OF DISCOVERY

The Core Spray System (EHS-BM) 1 minimum recirculation valves (CFI-FSV) (i.e., V-20-92 and V-20-94) are not sufficiently supported for the design seismic loads. Also, the Core Spray System 1 minimum recirculation line is not flexible enough to accept the design thermal expansion. This condition is considered to be reportable in accordance with 10CFR50.73 (a)(2)(ii).

CONDITION PRIOR TO DISCOVERY

At the time of discovery, the plant was operating at approximately full power. The condition has been present throughout the plant's operating history.

DESCRIPTION OF OCCURRENCE

The Core Spray System 1 minimum recirculation piping existing configuration does not meet the seismic and thermal expansion criteria allowables specified in the Updated Final Safety Analysis Report (UFSAR) Table 3.9-1, which is based on ANSI B31.1 code. The seismic plus maximum operating loads (i.e., dead weight and pressure) condition exceeds the code allowables by 2.33 times, using the design basis seismic response spectra. In addition, the thermal expansion load at the design temperature of 350°F, exceeds the code allowables by 4.87 times. This condition was discovered during the design process of a Core Spray piping modification.

APPARENT CAUSE OF OCCURRENCE

The cause of this condition was the inadequacy of the original piping design.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Oyster Creek, Unit 1	05000219	94	001	00	3 OF 3

ANALYSIS OF OCCURRENCE AND SAFETY SIGNIFICANCE

This condition is considered to have minimal safety significance for the following reasons:

1. An analysis using the most accurate seismic spectra currently available showed that the existing configuration is within the ASME Section III Level D allowable stress.
2. At the Core Spray System design temperature of 350°F, the configuration is acceptable for 30 cycles according to ASME Section III criteria. All evidence indicates that this pipe has not seen the design temperature specified in the analysis. Any significant back leakage past the parallel injection valves (CIF-INV) will be detected by the high pressure alarm (CIF-PA) and/or relief valve (CIF-RV) lifting alerting plant operators. There is no history of leakage with either the check valves (CIF-ISV) inside containment or the parallel injection valves. Therefore, no indication exists that it was ever overstressed.
3. Recent visual inspection (January 14, 1994) of the most highly stressed weld indicates no abnormality.

Based on the above safety significance discussion, Core Spray System 1 is operable by determining that it satisfies ASME Section III criteria. In the unlikely event of a seismic occurrence or thermal transient, this system would not fail to perform its designed safety function.

CORRECTIVE ACTIONS

The Core Spray System 2 minimum recirculation piping existing configuration is presently being reviewed to determine if it meets the seismic and thermal expansion criteria allowables specified in the UFSAR. A supplement to this report will be submitted following completion of this engineering review.

The Core Spray piping modification in accordance with the integrated living schedule will modify the existing configuration to meet the UFSAR commitments which is based on the ANSI B31.1 code.

SIMILAR EVENTS

- LER 85-023, Emergency Service Water System Seismic Concerns
- LER 86-014, Containment Spray System Seismic Concerns
- LER 86-021, Plant Systems Did Not Meet Seismic Design Basis