

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)
OYSTER CREEK, UNIT 1DOCKET NUMBER (2)
0 5 0 0 0 2 1 9 1 OF 0 3TITLE (4)
APRM SETPOINT DID NOT MEET ACCEPTANCE CRITERIA

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 NAMES		DOCKET NUMBER(S)
1	1	19	8	5	0	2	1	8	5		0 5 0 0 0

OPERATING MODE (9)	POWER LEVEL (10)	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5: (Check one or more of the following) (11)									
N	11,410	20.402(b)		20.405(e)		50.73(a)(2)(iv)		73.71(b)			
		20.405(a)(1)(i)		50.36(a)(1)		50.73(a)(2)(v)		73.71(e)			
		20.405(a)(1)(ii)		50.36(a)(2)		50.73(a)(2)(vi)		OTHER (Specify in Abstract below page 1a Text, NRC Form 366b)			
		20.405(a)(1)(iii)		50.73(a)(2)(i)		50.73(a)(2)(vii)(A)					
		20.405(a)(1)(iv)		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)(ix)					

LICENSEE CONTACT FOR THIS LER (12)
NAME
Don Notigan, Nuclear EngineerTELEPHONE NUMBER
AREA CODE
6 0 9 9 7 1 - 4 6 9 5

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

SUPPLEMENTAL REPORT EXPECTED (14)
YES (If yes, complete EXPECTED SUBMISSION DATE) ☐ NO ☒
EXPECTED SUBMISSION DATE (15)
MONTH DAY YEAR

ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16)

On November 19, 1985, at approximately 0400 hours during the performance of procedure 620.3.003, "APRM Surveillance Test and Calibration", the System I Average Power Range Monitor (APRM) flow converter trip setpoint was found to exceed both the as-found acceptance criteria of the surveillance and the Limiting Safety System Setpoint (LSSS) limit in the Oyster Creek Nuclear Generating Station technical specifications.

At the time of the discovery, the reactor was in the RUN mode at 59% power. The root cause was attributed to drifting of the trip setpoint in the electronic components of the flow converter unit. The immediate corrective action taken was to adjust the trip setpoint down to meet the acceptance criteria of the surveillance procedure and the technical specifications.

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		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
		8 5	— 0 2 1	— 0 0	0 2	OF	0 3

TEXT (If more space is required, use additional NRC Form 365A's) (17)

Date of Discovery

The date of discovery was November 19, 1985.

Identification of Discovery

The System I APRM flow converter trip setpoint was discovered to be above the Limiting Safety System setpoint in the Technical Specifications. This is reportable as required by 10CFR50.73(a)(2)i(b).

Conditions Prior to Discovery

The reactor was in the RUN mode at 59% power with the reactor coolant temperature at 530°F.

Description of Discovery

On November 19, 1985, at approximately 0400 hours, APRM System I flow converter trip setpoint was found to be above the Limiting Safety System setpoint in the technical specifications. The condition was discovered during the performance of a surveillance test in accordance with procedure 620.3.003. The surveillance is required to be performed weekly during power operation.

Technical Specification 2.3(o) requires that the trip setpoint for the Recirculation Flow Scram be less than or equal to 117%. The as-found instrument setpoint for Recirculation Flow Scram was 118%. The total recirculation flow scram is provided to limit the transient minimum critical power ratio (MCPR) resulting from a recirculation flow increase transient. As the APRM system responds to changes in neutron flux levels, the trip setpoint has been calculated to assure that the fuel cladding integrity safety limit is never reached. Since a trip signal from both the System I flow converter and the System II flow converter is required to produce a scram, a recirculation flow increase beyond 117% could have violated a Limiting Safety System setpoint without initiating an automatic reactor scram. The trip which would have initiated a reactor scram would have occurred at 118%.

Apparent Cause of Occurrence

The cause of this occurrence is attributed to setpoint drift.

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TEXT (If more space is required, use additional NRC Form 388A's) (17)

Analysis of Occurrence and Safety Assessment

The total recirculation flow scram is provided to limit the transient MCPR resulting from a recirculation flow increase transient. The APRM system also provides a control rod block. This rod block trip setpoint is automatically varied with recirculation loop flow rates to prevent an increase in reactor power due to control rod withdrawal and protect against exceeding MCPR fuel cladding safety limits. These safety limits include such factors as: excessive boiling in the core, reactor power distribution, reactor computer modeling uncertainties, and initial value of the MCPR at the time of the flow transient. The control rod block trip setpoint was found to be within the acceptance criteria of both the surveillance procedure and the Technical Specifications. At the time of the occurrence, there were no fuel bundles in the core at or above 80% of their operating MCPR limit. Additionally, the APRM protective instrumentation would have initiated an automatic control rod block, preventing any further withdrawal of control rods in the event of an excessive flow increase transient.

In summary, the safety significance of this discovery is minimized by the following four factors:

1. The minimum core wide MCPR at the time of the discovery was less than 80% of the operating MCPR limit.
2. The automatic control rod block for the APRM was operable and verified to be in specification.
3. An automatic reactor scram would have occurred at 118% recirculation flow. Therefore, there was only a 1% band where the requisite safety margin would be placed in question.
4. Administrative controls were in place which would have maintained the reactor in a safe condition.

Corrective Actions

Immediate corrective action was taken to adjust the flow converter trip setpoint down to within the acceptance criteria of both the surveillance procedure and the Technical Specifications. Surveillance procedure 620.3.003 is performed weekly to verify the acceptability of the flow converters trip setpoints.

Long term corrective action has been initiated to procure and install new electronic components in the flow converter unit.

(0135A)



GPU Nuclear Corporation

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Writer's Direct Dial Number:

December 18, 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

This letter forwards one (1) copy of Licensee Event Report (LER)
No. 85-021.

Very truly yours,

Peter B. Friedler
Vice President and Director
Oyster Creek

PBF:JR:dam(0135A)
Enclosures

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