



Exelon Generation®

Oyster Creek
741 Route 9 South
Forked River, NJ 08731

10 CFR 50.73

RA-18-074

July 31, 2018

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk or O-8B1
One White Flint North
11555 Rockville Pike
Rockville, MD 20852

Oyster Creek Nuclear Generating Station
Renewed Facility Operating License No. DPR-16
NRC Docket No. 50-219

Subject: Licensee Event Report (LER) 2018-001-00, "EMRV Pressure Sensor As-Found Setting Exceeded Limiting Safety System Settings"

Enclosed is LER 2018-001-00 reporting the as-found calibration setting of the "A" EMRV Pressure Sensor exceeding the Limiting Safety System Settings setpoint requirement.

This event did not affect the health and safety of the public or plant personnel. This event did not result in a safety system functional failure. There are no regulatory commitments made in this LER submittal.

Should you have any questions concerning this report, please contact Gary Flesher, Regulatory Assurance Manager, at (609) 971-4232.

Respectfully,

Michael F. Gillin

Michael F. Gillin
Plant Manager
Oyster Creek Nuclear Generating Station

Enclosure: NRC Form 366, LER 2018-001-00

cc: Administrator, NRC Region I
NRC Senior Resident Inspector - Oyster Creek Nuclear Generating Station
NRC Project Manager - Oyster Creek Nuclear Generating Station

IE 22
NRR



LICENSEE EVENT REPORT (LER)

(See Page 2 for required number of digits/characters for each block)

(See NUREG-1022, R.3 for instruction and guidance for completing this form
<http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1022/r3/>)

Estimated burden per response to comply with this mandatory collection request: 60 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the Information Services Branch (T-2 F43), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by e-mail to InfoCollect.Resource@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEDB-10202, (3150-0104), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

1. Facility Name

Oyster Creek Nuclear Generating Station

2. Docket Number

05000 - 219

3. Page

1 OF 3

4. Title

EMRV Pressure Sensor As-Found Setting Exceeded Limiting Safety System Settings

5. Event Date			6. LER Number			7. Report Date			8. Other Facilities Involved	
Month	Day	Year	Year	Sequential Number	Rev No.	Month	Day	Year	Facility Name	Docket Number
06	05	2018	2018	- 001	- 00	07	31	2018	N/A	05000
									Facility Name	Docket Number
									N/A	05000
9. Operating Mode										
11. This Report is Submitted Pursuant to the Requirements of 10 CFR §: (Check all that apply)										
N			<input type="checkbox"/> 20.2201(b)		<input type="checkbox"/> 20.2203(a)(3)(i)		<input type="checkbox"/> 50.73(a)(2)(ii)(A)		<input type="checkbox"/> 50.73(a)(2)(viii)(A)	
			<input type="checkbox"/> 20.2201(d)		<input type="checkbox"/> 20.2203(a)(3)(ii)		<input type="checkbox"/> 50.73(a)(2)(ii)(B)		<input type="checkbox"/> 50.73(a)(2)(viii)(B)	
			<input type="checkbox"/> 20.2203(a)(1)		<input type="checkbox"/> 20.2203(a)(4)		<input type="checkbox"/> 50.73(a)(2)(iii)		<input type="checkbox"/> 50.73(a)(2)(ix)(A)	
			<input type="checkbox"/> 20.2203(a)(2)(i)		<input type="checkbox"/> 50.36(c)(1)(i)(A)		<input type="checkbox"/> 50.73(a)(2)(iv)(A)		<input type="checkbox"/> 50.73(a)(2)(x)	
10. Power Level			<input type="checkbox"/> 20.2203(a)(2)(ii)		<input checked="" type="checkbox"/> 50.36(c)(1)(ii)(A)		<input type="checkbox"/> 50.73(a)(2)(v)(A)		<input type="checkbox"/> 73.71(a)(4)	
100			<input type="checkbox"/> 20.2203(a)(2)(iii)		<input type="checkbox"/> 50.36(c)(2)		<input type="checkbox"/> 50.73(a)(2)(v)(B)		<input type="checkbox"/> 73.71(a)(5)	
			<input type="checkbox"/> 20.2203(a)(2)(iv)		<input type="checkbox"/> 50.46(a)(3)(ii)		<input type="checkbox"/> 50.73(a)(2)(v)(C)		<input type="checkbox"/> 73.77(a)(1)	
			<input type="checkbox"/> 20.2203(a)(2)(v)		<input type="checkbox"/> 50.73(a)(2)(i)(A)		<input type="checkbox"/> 50.73(a)(2)(v)(D)		<input type="checkbox"/> 73.77(a)(2)(i)	
			<input type="checkbox"/> 20.2203(a)(2)(vi)		<input checked="" type="checkbox"/> 50.73(a)(2)(i)(B)		<input type="checkbox"/> 50.73(a)(2)(vii)		<input type="checkbox"/> 73.77(a)(2)(ii)	
					<input type="checkbox"/> 50.73(a)(2)(i)(C)		<input type="checkbox"/> Other (Specify in Abstract below or in NRC Form 366A)			

12. Licensee Contact for this LER

Licensee Contact

Gary Flesher, Regulatory Assurance Manager

Telephone Number (Include Area Code)

(609) 971-4232

13. Complete One Line for each Component Failure Described in this Report

Cause	System	Component	Manufacturer	Reportable to ICES	Cause	System	Component	Manufacturer	Reportable to ICES
X	SB	PS	B070	N					

14. Supplemental Report Expected

☐ Yes (If yes, complete 15. Expected Submission Date) ☒ No

15. Expected Submission Date

Month	Day	Year

Abstract (Limit to 1400 spaces, i.e., approximately 14 single-spaced typewritten lines)

While at full power steady state conditions, during calibration surveillance testing on 06/05/18, the 'A' Electromatic Relief Valve (EMRV) Pressure Switch (PS-1A0083A) as-found setpoint was at 1095 pounds per square inch, gauge (psig), which is above the Technical Specification (TS) Limiting Safety System Settings (LSSS) requirement of 1085 psig. The setpoint was immediately adjusted within an acceptable as-left band (within 38 minutes) using guidance in the surveillance test procedure. The cause of the condition was setpoint drift.

The TS Section 2.3.D LSSS values for Relief Valve Initiation are set to stagger relief valve opening for protection of the primary containment. The 'A' and 'C' EMRV LSSS are set at ≤ 1085 psig and 'B', 'D' and 'E' EMRV LSSS are set at ≤ 1105 psig.

This occurrence is considered to have minimal safety significance as the primary containment structural integrity is bounded by Mark 1 Containment Long Term Program analyses and modifications which assume that all relief valves actuate simultaneously at 1105 psig. The Automatic Depressurization System (ADS) function of the EMRV is not affected by this pressure switch. None of the pressure switches for the remaining 4 EMRVs were affected, and manual operation of the EMRV was not affected.

This issue is reportable under 10 CFR 50.36(c)(1)(ii)(A) for Limiting Safety System Settings where an automatic safety system does not function as required (setting out of range) and 10 CFR 50.73(a)(2)(i)(B) as an operation or condition which was prohibited by the plant's TS.

**LICENSEE EVENT REPORT (LER)
CONTINUATION SHEET**

(See NUREG-1022, R.3 for instruction and guidance for completing this form
<http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1022/r3/>)

Estimated burden per response to comply with this mandatory collection request: 80 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the Information Services Branch (T-2 F43), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by e-mail to infocollects.Resource@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202, (3150-0104), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

1. FACILITY NAMEOyster Creek Nuclear Generating
Station**2. DOCKET NUMBER**

05000 -219

3. LER NUMBER

YEAR

2018

SEQUENTIAL
NUMBER

- 001

REV
NO.

- 00

NARRATIVE**Plant Conditions Prior To Event**

Event Date: June 05, 2018

Event Time: 0900 EDT

Unit 1 Mode: Run

Power Level: 100%

There were no SSCs that were inoperable at the start of the event and contributed to the event.

Description of Event

During the quarterly performance of the EMRV Pressure Sensor Test and Calibration Surveillance Test (ST) the 'A' EMRV as-found setpoint value exceeded the TS LSSS limit of 1085 psig.

During performance of the ST for the EMRVs, each pressure switch is isolated by turning off the ADS/EMRV control switch and isolating the loop by closing an isolation valve. A test pump is then connected to a test port to pressurize the switch until the high switch trips. The test pressure is then decreased until the low switch resets. Switches are adjusted if found out of range and re-pressurized to validate setpoints. The process is repeated as needed until all setpoints are within as-left tolerances. The switch is then unisolated and returned to service prior to isolating and testing the next switch. The total out of service time is recorded by technicians for each switch tested.

During the performance of the ST on 06/05/18, the 'A' EMRV High Pressure Switch (PS-1A-0083A), did not meet "As-found Unadjusted Setpoint" requirements of 1064 psig to 1084 psig. The actual reading was 1095 psig. Technicians adjusted the setpoint within Technical Specification tolerances per the instructions in the surveillance procedure. The EMRV out of service time recorded during the ST for the calibration check and adjustment was 38 minutes. All of the remaining EMRV Pressure switches were tested with no out of tolerance conditions detected. An issue report was submitted to document the as-found out of tolerance condition of the EMRV pressure switch.

Equipment Description

Bourdon Tube type pressure switch manufactured by Barksdale, Model number B2S-M12SS-TC.

Analysis of Event

One of the functions of the EMRVs is to provide pressure control for the reactor pressure vessel. Together with the high pressure scram function and the Isolation Condenser System (IEEE BL), the EMRVs limit pressure in the Reactor Coolant System during high pressure transients.

The TS Section 2.3.D LSSS values for EMRV initiation are set to stagger relief valve (EMRV) opening for protection of the primary containment. The 'A' and 'C' EMRV LSSS are set at ≤ 1085 psig and 'B', 'D' and 'E' EMRV LSS are set at ≤ 1105 psig. The as found high pressure trip value was 1095 psig which exceeds the TS LSSS Limits. This occurrence is considered to have minimal safety significance as the primary containment structural integrity is bounded by Mark 1 Containment Long Term Program analyses and modifications which assume that all relief valves actuate simultaneously at 1105 psig. Hence, the LSSS of 1085 psig is conservative; actuation of the 'A' EMRV at 1095 psig would not result in a challenge to containment design limits.

The EMRVs are part of the Automatic Depressurization System (ADS) (IEEE BM). This system is designed to depressurize the Reactor Coolant System (IEEE AB) during small break Loss-of-Coolant Accident conditions so that the low pressure Core Spray System (IEEE EM) can inject water into the reactor. The ADS function of the EMRVs is not affected by these pressure switches. The ADS signal is initiated by the simultaneous occurrence of RPV triple low water level, high drywell pressure and core spray booster pump differential pressure. All EMRVs would actuate at the same time upon receipt of an ADS signal. ADS initiation logic is independent of the EMRV Pressure switch logic.

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CONTINUATION SHEET**

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05000 -219

3. LER NUMBER

YEAR	SEQUENTIAL NUMBER	REV NO.
2018	- 001	- 00

NARRATIVE**Cause of Event**

The cause of this occurrence is instrument drift above the LSSS limit. This has not occurred since the last LER on EMRV setpoint drift in 1994. A review of surveillance trend data shows no degrading trend in performance of the switch beyond normal drift in band. A review of surveillance data since installation of the subject switch on 10/27/15 shows that no as-found setpoint adjustments have been required during any of the tests.

Corrective Actions

The subject instrument setpoint was adjusted within the as-left surveillance tolerance band, and successfully tested.

Assessment of Safety Consequences

This occurrence is considered to have minimal safety significance as: 1) Staggered EMRV initiation is conservative. After implementation of the modifications related to the Mark 1 Containment Long Term Program, EMRV staggering was no longer necessary since the supporting structural analyses assumed that all five EMRVs opened at 1105 psig. The subject "A" EMRV pressure switch as-found setpoint (1095 psig) is bounded by these analyses; 2) the ADS function of the EMRVs is not affected by this pressure switch, therefore, all five EMRVs would have actuated to relieve pressure; 3) the Isolation Condenser System and turbine bypass valves were fully operable; 4) manual operation of the EMRVs was not affected; and 5) the reactor safety valves are designed to prevent reaching the Reactor Coolant System pressure safety limit of 1375 psig on a complete loss of EMRV relief capability.

Previous Occurrences

LER 81-40	EMRV Pressure Sensor Test and Calibration
LER 81-51	EMRV High Pressure Sensor
LER 81-57	Reactor High Pressure Switch "B" EMRV
LER 82-24	EMRV Switch out of Technical Specification Limit
LER 90-10	EMRV High Pressure Relief Setpoints Exceed Technical Specification Limit Due to Drift
LER 92-12	EMRV High Pressure Relief Setpoints Exceed Technical Specification Limit Due to Drift
LER 94-08	EMRV Setpoints Exceed Tech Spec Limits Due to Drift
LER 94-12	EMRV High Pressure Relief Setpoints Exceed Technical Specification Limit Due to Drift

Component Data

Component

IEEE 805 System ID

IEEE 803A Component

Pressure Switch

SB

PS