



Exelon Generation®

Oyster Creek  
741 Route 9 South  
Forked River, NJ 08731

10 CFR 50.73

RA-17-082

February 16, 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) 2017-004-01, "Reactor Protection System Channel Disabled during Test Box Use."

Enclosed is LER 2017-004-01 reporting the failure to implement the required action statement as described by Technical Specifications when performing the Turbine Trip and Generator Load Rejection surveillance testing. The LER has been revised to add supplemental information as required by Revision 00 of the document.

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  
Plant Manager  
Oyster Creek Nuclear Generating Station

Enclosure: NRC Form 366, LER 2017-004-01

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

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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/nureqs/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 FOIA, Privacy and Information Collections Branch (T-5 F53), 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.

<b>1. FACILITY NAME</b> Oyster Creek Nuclear Generating Station	<b>2. DOCKET NUMBER</b> 05000219	<b>3. PAGE</b> 1 OF 3
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**4. TITLE**  
Reactor Protection System Channel Disabled During Test Box Use

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
08	31	2017	2017	004	01	02	16	2018	N/A	05000
									FACILITY NAME	DOCKET NUMBER
									N/A	05000

<b>9. OPERATING MODE</b>	<b>11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check all that apply)</b>			
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 type="checkbox"/> 50.36(c)(1)(ii)(A)	<input type="checkbox"/> 50.73(a)(2)(v)(A)	<input type="checkbox"/> 73.71(a)(4)
	<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
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**13. COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT**

CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX
A	N/A	N/A	N/A	N	N/A	N/A	N/A	N/A	N/A

<b>14. SUPPLEMENTAL REPORT EXPECTED</b>	<b>15. EXPECTED SUBMISSION DATE</b>	MONTH	DAY	YEAR
<input type="checkbox"/> YES (If yes, complete 15. EXPECTED SUBMISSION DATE) <input checked="" type="checkbox"/> NO		-	-	-

**ABSTRACT** (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines)

On August 31, 2017, during a review of industry Operating Experience (FERMI 2, LER 2017-001) for the use of a Reactor Protection System (RPS) test box during main turbine surveillance testing, it was determined that Oyster Creek station procedures failed to implement the required action specified by Technical Specifications (TS) section 3.1.1, note (nn) during testing. The surveillance tests associated with the Turbine Trip and Generator Load Rejection functions were revised in 2013 to use an RPS test box in order to minimize operational risks associated with the receipt of half scram signals during testing. The installation of the RPS test box caused two of the four required instrument channels for the Turbine Trip Scram function to be bypassed during testing.

In accordance with station Technical Specifications, the required action to verify sufficient channels remained operable was not documented as complete within the action time specified in TS Table 3.1.1, note (nn). This issue was identified under normal operating conditions, and is reportable under 10 CFR 50.73(a)(2)(i)(B).



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

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1. FACILITY NAME	2. DOCKET NUMBER	3. LER NUMBER		
		YEAR	SEQUENTIAL NUMBER	REV NO.
Oyster Creek Nuclear Generating Station	05000219	2017	- 004	- 01

**NARRATIVE**

**Plant Conditions Prior To Event**

Event Date: August 31, 2017      Event Time: 10:30 hours ET  
 Unit 1 Mode: Run      Power Level: 100%

**Description of Event**

On August 31, 2017, during a review of industry Operating Experience (FERMI 2 2017-001) for the use of a Reactor Protection System (RPS) test box during main turbine surveillance testing, it was determined that the Oyster Creek station procedures failed to implement the required action specified by Technical Specifications (TS) Section 3.1.1, note (nn) during testing. The surveillance tests associated with the Turbine Trip and Generator Load Rejection functions were revised in 2013 to use an RPS test box to minimize operational risks associated with the receipt of half scram signals during testing. With the RPS test box installed, two of the four required Turbine Trip Scram inputs were bypassed. The action to verify sufficient channels remained operable was not documented as complete within one (1) hour as specified in TS Table 3.1.1, note (nn).

TS Table 3.1.1, Function 11, Turbine Trip Scram, specifies the minimum number of operable channels as four per trip system. The test directed the RPS test box to be installed around the relay that actuates the specific channel in the RPS division that would receive a trip signal when the turbine stop valves closed or the pressure switch that senses low trip system oil pressure for the main turbine was tested.

**Cause of Event**

The cause has been determined to be insufficient technical rigor during the development of the procedure revision, and the failure to obtain an independent technical review of the procedure changes. The procedure preparer and approver did not identify that installation of the RPS test box resulted in the need to execute the TS action. Consequently, the Turbine Trip and Generator Load Rejection surveillance test procedures did not direct the performance of the required action.

**Analysis of the Event**

Since May 2013, Oyster Creek has used an RPS test box to perform the Turbine Trip and Generator Load Rejection surveillance tests. Each RPS division contains two logic channels that receive inputs from the turbine stop valve limit switches. Two stop valve limit switches are assigned to each RPS logic channel. The assignment of stop valve limit switches varies between the two channels in RPS division 1 and RPS division 2. When the turbine stop valves are less than 90 percent open, a limit switch associated with that valve opens in the RPS logic. When two stop valve limit switches in one trip channel open, a relay in the RPS logic system (relay 1K11, 1K12, 2K11, or 2K12) is deenergized, causing a half scram signal to be initiated. Installation of the RPS test box during the Turbine Trip and Generator Load Rejection surveillance tests would prevent the relays in the RPS channel from initiating causing the two stop valves assigned to that channel to be rendered inoperable.



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**NARRATIVE**

**Assessment of Safety Consequences**

The RPS has two independent trip systems with two logic channels in each trip system. The use of the RPS test box only impacts one channel in the RPS division being tested. The ability to receive a full scram due to a turbine stop valve closure when the RPS test box was installed for testing was not inhibited since the other channel in the RPS division being tested was unaffected by the installation of the RPS test box.

**Corrective Actions**

1. All operating procedures using the test box, including the Turbine Stop Valve Anticipatory Scram and Turbine Load Rejection Scram surveillance tests, will be revised to reflect the TS Section 3.1.1. note (nn) requirement prior to next use. The procedures direct sufficient channels remain operable and a log entry made verifying the total amount of time the channel has been bypassed during test box installation is less than the time limit specified in the TS.
2. All station surveillances which implemented test boxes for Station Qualified Reviewer errors were reviewed as part of the extent of condition with no other deficiencies noted.

**Previous Occurrences**

There have been no similar, previous events resulting from the installation of a test box during surveillance testing at Oyster Creek.

**Component Data**

Component	IEEE 805 System ID	IEEE 803A Component
N/A	N/A	N/A