



**Exelon** Generation®

**Dresden Nuclear Power Station**

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10 CFR 50.73

September 10, 2012

SVPLTR: #12-0048

U. S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, DC 20555-0001

Dresden Nuclear Power Station, Unit 3  
Renewed Facility Operating License No. DPR-25  
NRC Docket No. 50-249

Subject: Licensee Event Report 249/2012-001-00, Unexpected Isolation of the Isolation  
Condenser Due to Test Switch Failure

Enclosed is Licensee Event Report 249/2012-001-00, "Unexpected Isolation of the Isolation  
Condenser Due to Test Switch Failure." This event is being reported in accordance with 10  
CFR 50.73(a)(2)(v)(B), "Any event or condition that could have prevented the fulfillment of the  
safety function of structures or systems that are needed to remove residual heat."

There are no regulatory commitments contained in this submittal.

Should you have any questions concerning this letter, please contact Mr. Hal Dodd at  
(815) 416-2800.

Respectfully,

David M. Czufin  
Site Vice President  
Dresden Nuclear Power Station

Enclosure

cc: Regional Administrator – NRC Region III  
NRC Senior Resident Inspector – Dresden Nuclear Power Station

IEZZ  
NRR

# LICENSEE EVENT REPORT (LER)

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

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 Section (T-5 F53), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet 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> Dresden Nuclear Power Station, Unit 3	<b>2. DOCKET NUMBER</b> 05000249	<b>3. PAGE</b> 1 OF 3
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**4. TITLE**  
Unexpected Isolation of the Isolation Condenser Due to Test Switch Failure

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
07	10	2012	2012	- 001 -	00	09	10	2012	N/A	05000
									FACILITY NAME	DOCKET NUMBER
									N/A	05000

**9. OPERATING MODE**  
1

**11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §:** (Check all that apply)

<input type="checkbox"/> 20.2201(b)	<input type="checkbox"/> 20.2203(a)(3)(i)	<input type="checkbox"/> 50.73(a)(2)(i)(C)	<input type="checkbox"/> 50.73(a)(2)(vii)
<input type="checkbox"/> 20.2201(d)	<input type="checkbox"/> 20.2203(a)(3)(ii)	<input type="checkbox"/> 50.73(a)(2)(ii)(A)	<input type="checkbox"/> 50.73(a)(2)(viii)(A)
<input type="checkbox"/> 20.2203(a)(1)	<input type="checkbox"/> 20.2203(a)(4)	<input type="checkbox"/> 50.73(a)(2)(ii)(B)	<input type="checkbox"/> 50.73(a)(2)(viii)(B)
<input type="checkbox"/> 20.2203(a)(2)(i)	<input type="checkbox"/> 50.36(c)(1)(i)(A)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(ix)(A)
<input type="checkbox"/> 20.2203(a)(2)(ii)	<input type="checkbox"/> 50.36(c)(1)(ii)(A)	<input type="checkbox"/> 50.73(a)(2)(iv)(A)	<input type="checkbox"/> 50.73(a)(2)(x)
<input type="checkbox"/> 20.2203(a)(2)(iii)	<input type="checkbox"/> 50.36(c)(2)	<input type="checkbox"/> 50.73(a)(2)(v)(A)	<input type="checkbox"/> 73.71(a)(4)
<input type="checkbox"/> 20.2203(a)(2)(iv)	<input type="checkbox"/> 50.46(a)(3)(ii)	<input checked="" type="checkbox"/> 50.73(a)(2)(v)(B)	<input type="checkbox"/> 73.71(a)(5)
<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)(C)	<input type="checkbox"/> OTHER
<input type="checkbox"/> 20.2203(a)(2)(vi)	<input type="checkbox"/> 50.73(a)(2)(i)(B)	<input type="checkbox"/> 50.73(a)(2)(v)(D)	Specify in Abstract below or in NRC Form 366A

**12. LICENSEE CONTACT FOR THIS LER**

NAME Riley Ruffin – Regulatory Assurance	TELEPHONE NUMBER (Include Area Code) 815-416-2815
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**13. COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT**

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX
E	NA	HS	NA	Y					

<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 July 10, 2012, at 0236 hours CDT, plant personnel were performing the high condensate and steam flow calibration surveillance for the Isolation Condenser. The surveillance was being performed to satisfy technical specification (TS) surveillance requirements for the primary containment isolation instrumentation TS 3.3.6.1. In order to prevent actuation of the isolation logic, a test toggle switch is installed in parallel with the channel contacts that are being tested. This configuration provides electrical continuity around the channel contacts that will be actuated during the testing.

The test toggle switch was installed around the contacts associated with the steam line flow differential pressure switch. At the time that the high flow signal was simulated for the channel being tested, an unexpected Isolation Condenser isolation occurred. The cause of the isolation is attributed to the failure of the test toggle switch to maintain electrical continuity during the test. The Isolation Condenser was declared inoperable and the associated TS 3.5.3 actions were performed. The Isolation Condenser system was restored to operable status at approximately 1055 hours.

The safety significance of this condition is low. Following isolation of the Isolation Condenser, the High Pressure Coolant Injection system, was available and capable of providing pressure control and makeup to the reactor vessel inventory. The health and safety of the public were not compromised as a result of this condition.

This event is being reported in accordance with 10 CFR 50.73(a)(2)(v)(B), "Any event or condition that could have prevented the fulfillment of the safety function of structures or systems that are needed to remove residual heat."

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

1. FACILITY NAME	2. DOCKET	6. LER NUMBER			3. PAGE		
Dresden Nuclear Power Station, Unit 3	05000249	YEAR	SEQUENTIAL NUMBER	REV NO.	2 OF 3		
		2012	- 001	- 00			

**NARRATIVE**

**PLANT AND SYSTEM IDENTIFICATION**

Dresden Nuclear Power Station (DNPS) Units 2 and 3 are General Electric Company Boiling Water Reactors with a licensed maximum power level of 2957 megawatts thermal. The Energy Industry Identification System codes used in the text are identified as [XX].

**A. Plant Conditions Prior to Event:**

Unit: 03	Event Date: 7-10-2012	Event Time: 0236 hours CDT
Reactor Mode: 1	Mode Name: Power Operation	Power Level: 100 percent

**B. Description of Event:**

On July 10, 2012, instrument maintenance personnel prepared to perform instrument calibration for the high flow isolation logic associated with the Isolation Condenser [BL] system. Instrumentation for both the high steam flow and high return flow were to be calibrated and functionally tested during the maintenance. The high flow instruments are arranged in series and if a high flow signal is received, it causes relay 0595-115A or 0595-115B to de-energize. These relays in turn provide inputs into the isolation trip logic for the Isolation Condenser. In order to prevent trip logic actuation during testing, test toggle switches (TTSs) are installed in parallel with contacts from both the 0595-115 relays that input into the trip logic. In accordance with plant procedures, maintenance personnel installed four TTSs to accommodate testing of both divisions of the high flow instrumentation.

Using plant procedures, maintenance personnel commenced testing of differential pressure indicating switch 3-1350A, Isolation Condenser high steam flow. The toggle switches for TTS TS-A and TS-AA were placed in the "ON" positions. At approximately 0236 hours, a high flow signal was simulated and the 0595-115A relay de-energized as expected. However, the main control room received an unexpected annunciator indicating an isolation condenser line break due to trip logic relay 0595-116A also de-energizing as relay 0595-115A changed state. This occurrence indicated that TS-A, which had been installed in parallel to contacts 3 and 4 of relay 0595-115A, had not maintained electrical continuity.

At approximately 0236 hours, the Isolation Condenser system was declared inoperable. Operations personnel entered and performed the required actions specified by Technical Specification 3.5.3.

This condition resulted in an inboard isolation signal to the Isolation Condenser. All of the appropriate valves completed their isolation function, as designed.

Following the unexpected isolation, walkdowns were performed to verify that the proper configuration had been used. No anomalies were identified. Voltage at the termination points of TS-A was tested and confirmed that the installed TTS had failed to maintain electrical continuity.

The Isolation Condenser system was restored to the standby condition in accordance with plant procedures and the system was declared operable at approximately 1055 hours on July 10, 2012.

The unplanned isolation of the Isolation Condenser system is reportable in accordance with 10 CFR 50.73(a)(2)(v)(B), "Any event or condition that could have prevented the fulfillment of the safety function of structures or systems that are needed to remove residual heat."

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**NARRATIVE**

**C. Cause of Event:**

The suspect TTS was sent for failure analysis. The failure analysis indicated that the most probable cause was grease on the TTS internal stationary contacts. The TTSs were assembled by plant instrument maintenance personnel between 1998 and 2000. Even though the TTS test leads are periodically replaced, there have been no preventative maintenance activities to identify age-related degradation with regard to TTS internal operations.

**D. Safety Analysis:**

The safety significance of this condition is low. The High Pressure Coolant Injection system [BJ] was available to provide pressure control and makeup to the reactor vessel inventory in the event of an accident or transient. Therefore, health and safety of the public were not compromised as a result of this condition.

**E. Corrective Actions:**

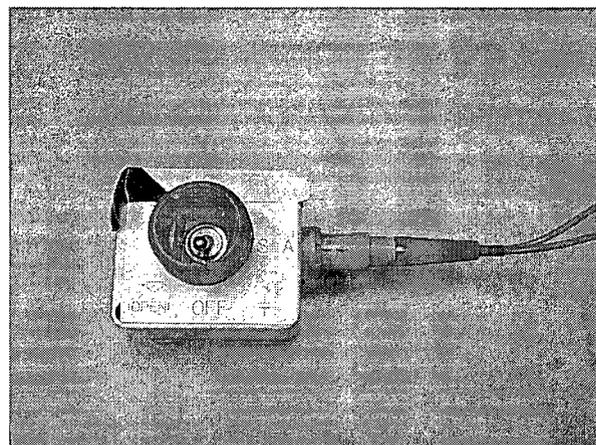
All TTSs were replaced. A preventative maintenance activity is being generated to inspect or refurbish all TTSs assembled by the instrument maintenance personnel on a periodic basis.

**F. Previous Occurrences:**

A review of DNPS Licensee Event Reports (LERs) for the last three years did not reveal any reportable conditions related to Isolation Condenser isolations.

**G. Component Failure Data:**

Manufacturer	Component Type	Model
N/A	Toggle Switch	N/A



Test Toggle Switch