

April 4, 2005

SVPLTR: #05-0011

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

Dresden Nuclear Power Station, Units 2 and 3
Renewed Facility Operating License Nos. DRP-19 and DPR-25
NRC Docket Nos. 50-237 and 50-249

Subject: Licensee Event Report 237/2005-001, "4160 Volt Relaying and Metering Single Failure Vulnerability for Units 2 and 3."

Enclosed is Licensee Event Report 237/2005-001, "4160 Volt Relaying and Metering Single Failure Vulnerability for Units 2 and 3," for Dresden Nuclear Power Station. This event is being reported in accordance with 10 CFR 50.73(a)(2)(ii)(B), "Any event or condition that resulted in the nuclear power plant being in an unanalyzed condition that significantly degraded plant safety," and 10 CFR 50.73(a)(2)(i)(B), "Any operation or condition which was prohibited by the plant's Technical Specifications."

Should you have any questions concerning this report, please contact Pedro Salas, Regulatory Assurance Manager, at (815) 416-2800.

Respectfully,

Original Signed by

Danny G. Bost
Site Vice President
Dresden Nuclear Power Station

Enclosure

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

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: 50 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the Records and FOIA/Privacy Service Branch (T-5 F52), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to infocollects@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 NAME Dresden Nuclear Power Station Unit 2	2. DOCKET NUMBER 05000237	3. PAGE 1 OF 4
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4. TITLE
4160 Volt Relaying and Metering Single Failure Vulnerability for Units 2 and 3

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
02	03	2005	2005	- 001 -	00	04	04	2005	Dresden Unit 3	05000249
									FACILITY NAME	DOCKET NUMBER
									N/A	N/A

9. OPERATING MODE 1	11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR§: <i>(Check all that apply)</i>									
10. POWER LEVEL 095	<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 checked="" 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 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 checked="" 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

FACILITY NAME Dresden Nuclear Power Station – George Papanic Jr.	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
NA					NA				

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

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

On February 3, 2005, at 1915 hours (CST), with Unit 2 at approximately 95 percent power and Unit 3 at approximately 96 percent power, Dresden Nuclear Power Station engineering personnel confirmed that single failure vulnerabilities existed on 4160 Volt Relaying and Metering transformers on both units. The single failure vulnerabilities defeated the independence of the offsite alternating current power supplies. If this failure occurred during a Loss of Coolant Accident, the Containment Cooling Service Water system pumps may not have been able to be started within the required time. The single failure vulnerabilities were removed on February 4, 2005, at 0009 hours, and the effected plant equipment was declared operable.

The root cause of this event was determined to be an existing latent design deficiency. The corrective action to prevent reoccurrence is currently in place in the Configuration Change procedures used to install new designs at Dresden Nuclear Power Station. A preliminary engineering review for similar existing latent design deficiencies found no other similar deficiencies. A corrective action is in place for engineering to complete an extent of condition review of the alternating current, Emergency Diesel Generators, and direct current systems for latent design deficiency conditions similar to this event.

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Dresden Nuclear Power Station Unit 2	05000237	2005	-- 001	-- 00	3 OF 4

NARRATIVE (If more space is required, use additional copies of NRC Form 366A) (17)

This event is being reported in accordance with:

10 CFR 50.73(a)(2)(ii)(B), "Any event or condition that resulted in the nuclear power plant being in an unanalyzed condition that significantly degraded plant safety," as the single failure vulnerability defeated the single failure design of plant systems on Units 2 and 3, and

10 CFR 50.73(a)(2)(i)(B), "Any operation or condition which was prohibited by the plant's Technical Specifications," as the single failure vulnerability rendered Technical Specification equipment inoperable for a period of time that exceeded Technical Specification Allowed Outage Times on Units 2 and 3.

C. Cause of Event:

The root cause of this event was determined to be an existing latent design deficiency.

The original design of DNPS met the engineering standard practice of the time (the late 1960's and early 1970's) and was designed prior to the issuance of many of the Institute of Electrical and Electronics Engineers (IEEE) standards related to nuclear power stations. This design can also be found in non-nuclear facilities of similar vintage. The initial design contained the above described single failure vulnerability.

The purpose of interconnecting the transformers was to obtain total power reading from the UAT / RAT for totalization. These meters were a precursor to the revenue metering of today, and were used for internal utility accounting purposes. The transformers used for the totalizer were not required to be as accurate as those used for revenue metering. The preferred practice was to use separate transformers for metering and relaying; however, it was not uncommon, due to space limitations, cost, or retrofits, to use relaying transformers for metering and to interconnect them in this configuration.

D. Safety Analysis:

The safety significance of the event is minimal. The single failure to which the 4160 Volt Relaying and Metering transformers associated with the UATs and RATs on both units are vulnerable is not a typical or likely failure mode, and has not occurred historically at DNPS. Therefore, the consequences of this event had minimal impact on the health and safety of the public and reactor safety.

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E. Corrective Actions:

A temporary modification was installed to eliminate the identified single failure vulnerabilities.

The Corrective Action to Prevent Recurrence is currently in place as a result of the Configuration Change procedures used to install new designs at Exelon facilities. Separation and Station Single Point Vulnerability reviews, Exelon Human Performance Technical Rigor Standards, and failure mode and effect conditions are part of the preparation and review process contained in existing Exelon procedures.

A permanent modification to the circuitry to eliminate the single failure vulnerability will be designed and installed.

A preliminary DNPS engineering review for similar existing latent design deficiencies found no other similar deficiencies. A corrective action is in place for engineering to complete an extent of condition review of the alternating current, Emergency Diesel Generators, and direct current systems for latent design deficiency conditions similar to this event.

DNPS engineering will review this event as part of group discussions to raise awareness of common circuits and the potential to affect more than one train of equipment.

DNPS engineering will include a description of this event in continuing engineering training to raise awareness of common circuits and their potential to affect more than one train of equipment.

F. Previous Occurrences:

A review of DNPS Licensee Event Reports (LERs) identified no similar events.

G. Component Failure Data:

NA