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10 CFR 50.73

December 1, 2003

RHLTR: #03-0079

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

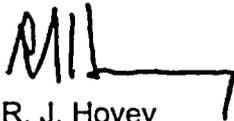
Dresden Nuclear Power Station, Unit 2
Facility Operating License No. DRP-19
NRC Docket No. 50-237

Subject: Licensee Event Report 2003-003-00, "Unit 2 Reactor Feedwater Pump Trip and Automatic Reactor Scram"

Enclosed is Licensee Event Report 2003-003-00, "Unit 2 Reactor Feedwater Pump Trip and Automatic Reactor Scram," for Dresden Nuclear Power Station, Unit 2. This event is being reported in accordance with 10 CFR 50.73(a)(2)(iv)(A), "Any event or condition that resulted in manual or automatic actuation of any of the systems listed in paragraph (a)(2)(iv)(B) of this section."

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

Respectfully,



R. J. Hovey
Site Vice President
Dresden Nuclear Power Station

Enclosure

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

IE22

LICENSEE EVENT REPORT (LER)

Estimated burden per response to comply with this mandatory information 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 Management Branch (T-6 E6), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to bjs1@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 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 3
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4. TITLE Unit 2 Reactor Feedwater Pump Trip and Automatic Reactor Scram

5. EVENT DATE			6. LER NUMBER			7. REPORT DATE			8. OTHER FACILITIES INVOLVED	
MO	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REV NO	MO	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
09	30	2003	2003	- 003	- 00	12	01	2003	N/A	N/A
									FACILITY NAME	DOCKET NUMBER
									N/A	N/A

9. OPERATING MODE 1	10. POWER LEVEL 085	11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check all that apply)								
		20.2201(b)	20.2203(a)(3)(ii)	50.73(a)(2)(ii)(B)	50.73(a)(2)(ix)(A)					
		20.2201(d)	20.2203(a)(4)	50.73(a)(2)(iii)	50.73(a)(2)(x)					
		20.2203(a)(1)	50.36(c)(1)(i)(A)	X 50.73(a)(2)(iv)(A)	73.71(a)(4)					
		20.2203(a)(2)(i)	50.36(c)(1)(ii)(A)	50.73(a)(2)(v)(A)	73.71(a)(5)	OTHER Specify in Abstract below or in NRC Form 366A				
		20.2203(a)(2)(ii)	50.36(c)(2)	50.73(a)(2)(v)(B)						
		20.2203(a)(2)(iii)	50.46(a)(3)(ii)	50.73(a)(2)(v)(C)						
		20.2203(a)(2)(iv)	50.73(a)(2)(i)(A)	50.73(a)(2)(v)(D)						
		20.2203(a)(2)(v)	50.73(a)(2)(i)(B)	50.73(a)(2)(vii)						
		20.2203(a)(2)(vi)	50.73(a)(2)(i)(C)	50.73(a)(2)(viii)(A)						
		20.2203(a)(3)(i)	50.73(a)(2)(ii)(A)	50.73(a)(2)(viii)(B)						

12. LICENSEE CONTACT FOR THIS LER	
NAME George Papanic Jr.	TELEPHONE NUMBER (Include Area Code) (815) 416-2815

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
X	SJ	CBL	Simplex	Y					

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

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

On September 30, 2003, at 2014 hours (CDT), an automatic reactor scram occurred due to a low reactor water level scram signal. The low reactor water level was the result of the trip of the 2C Reactor Feedwater Pump. The 2C Reactor Feedwater Pump trip occurred due to a valid over current ground relay actuation from a fault in the B phase power cable to the 2C Reactor Feedwater Pump.

The root cause of the cable fault was indeterminate as the section of the cable which contained the fault could not be retrieved. Testing of retrievable cable sections did not identify the failure mechanism. The cable was replaced.

The safety significance of this event was minimal. All control rods fully inserted and all systems responded as expected to the scram. The loss of feedwater flow is an analyzed transient and is classified as a moderate frequency event in the Updated Final Safety Analysis Report. There were no subsequent major equipment malfunctions.

NRC FORM 366A U.S. NUCLEAR REGULATORY COMMISSION (7-2001)		APPROVED BY OMB NO. 3150-0104 EXPIRES 07/31/2004 Estimated burden per response to comply with this mandatory information collection request: 50 hrs. Reported lessons learned are incorporated into the licensing process and fed back to industry. Forward comments regarding burden estimate to the information and Records Management Branch (t-6 f33), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, and to the Paperwork Reduction Project (3150-0104), Office Of Management And Budget, Washington, DC 20503. If 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.	
LICENSEE EVENT REPORT (LER) TEXT CONTINUATION			
FACILITY NAME (1)		DOCKET NUMBER (2)	
Dresden Nuclear Power Station Unit 2		05000237	
		LER NUMBER (6)	
		YEAR	SEQUENTIAL NUMBER
		2003	003
		REVISION NUMBER	PAGE (3)
		00	2 of 3

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

Dresden Nuclear Power Station Unit 2 is a General Electric Company Boiling Water Reactor 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: 02	Event Date: 09-30-2003	Event Time: 2014 CDT
Reactor Mode: 1	Mode Name: Power Operation	Power Level: 85 percent
Reactor Coolant System Pressure: 1000 psig		

B. Description of Event:

Dresden Nuclear Power Station, Unit 2 has three Reactor Feedwater Pumps (RFPs) [SJ], 2-3201-A (2A), 2-3201-B (2B) and 2-3201-C (2C). On September 28, 2003, the reactor power level was reduced to approximately 85 percent to allow for two RFP operation. On September 29, 2003, RFP 2A was removed from service for planned maintenance.

On September 30, 2003, at 2014 hours (CDT), with Unit 2 still at 85 percent power and two RFP operation, an automatic reactor scram occurred due to a low reactor water level scram signal as a result of the trip of the 2C RFP. A manual scram was initiated concurrent with the automatic scram. The plant is not designed to automatically recover from an RFP trip when in two RFP operation. The 2C RFP trip occurred due to a valid over current ground relay 150GS [RLY] actuation from a fault in the B phase of the 2C RFP Cable 20557 [CBL]. The plant responded as expected to the scram; all control rods [AA] inserted, the Main Turbine/Generator [TATB] tripped, Group 2 and 3 isolation valves [BD] closed, the Reactor Water Cleanup System [CE] and the Reactor Building [NG] ventilation isolated and train B of the Standby Gas Treatment System [VA] started. There were no subsequent major equipment malfunctions.

An Emergency Notification System (ENS) call was made on September 30, 2003 at 2211 hours (CDT) for the above-described event. The assigned ENS event number was 40209.

Dresden Nuclear Power Station, Unit 2 was synchronized to the grid on October 2, 2003 and RFP 2C was returned to service on October 12, 2003.

This event is being reported in accordance with 10 CFR 50.73(a)(2)(iv)(A), "Any event or condition that resulted in manual or automatic actuation of any of the systems listed in paragraph (a)(2)(iv)(B) of this section." The automatic actuation of the reactor protection system is listed in 10 CFR 50.73(a)(2)(iv)(B).

C. Cause of Event:

The root cause of the Cable 20557 fault was indeterminate. RFP Cable 20557 is a medium voltage, 5 kilovolts 1500 MCM, Simplex Anhydrex XX Insulated Plastex Jacketed cable. The cable has an approximate length of 212 feet, is routed from BUS 22 [BU] to the 2C RFP and was installed during initial plant construction. A Time Domain Reflectometry test was performed to approximate the fault location. The fault was approximately located in Cable Tray 262B [TY] at about 108 feet from BUS 22. To validate the cable fault cause, portions of Cable 20557 were

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		REVISION NUMBER	PAGE (3)
		2003	003
		00	3 of 3

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

removed to allow megger testing. A detailed walkdown of the accessible portions of Cable Tray 262B was performed and no physical damage or burn evidence were identified.

There are approximately 203 cables, including Nuclear Safety Related Division II cables, in the cable tray at the approximate location of the Cable 20557 fault. Numerous options were reviewed for retrieving the faulted section of Cable 20557. However, due to the local cable density and its location in the bottom of the cable tray, removal of the faulted section was not deemed practical and it was decided that Cable 20557 be abandoned-in-place.

Accessible portions of Cable 20557 from the 2C RFP and BUS 22 ends were removed. Laboratory testing of the retrieved cable sections was performed for potential failure mechanisms including primary insulation age related degradation, mechanical damage, chemical intrusion, electrical surge/spike and manufacturing defects. The testing did not identify the fault mechanism.

D. Safety Analysis:

The safety significance of this event was minimal. All control rods fully inserted and all systems responded as expected to the scram. The loss of feedwater flow is an analyzed transient and is classified as a moderate frequency event in the Updated Final Safety Analysis Report. There were no subsequent major equipment malfunctions. Therefore, the consequences of this event had minimal impact on the health and safety of the public and reactor safety.

E. Corrective Actions:

Cable 20557 was replaced.

RFPs 2A, 2B and the remaining RFP 2C power cables were successfully bridge and megger tested.

Accessible portions of Cable 20557 from the 2C RFP and BUS 22 ends were removed and laboratory testing was performed for potential failure mechanisms including primary insulation age related degradation, mechanical damage, chemical intrusion, electrical surge/spike and manufacturing defects.

Management expectation that when time permits a manual scram should be initiated prior to the plant reaching an automatic scram set point was discussed and reinforced with operations personnel.

F. Previous Occurrences:

A review of Dresden Nuclear Power Station Licensee Event Reports and operating experience over the previous five years found no previous or similar occurrences.

G. Component Failure Data:

Simplex Anhydrex XX Insulated Plastex Jacketed cable, 5kV, 1500 MCM.