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Exelon Nuclear

10 CFR 50.73

July 30, 2002

RHLTR: #02-0057

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

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

Subject: Licensee Event Report 2002-004-00, "Control Room Ventilation Ductwork Breached During Replacement of Temperature Transmitter"

Enclosed is Licensee Event Report 2002-004-00, "Control Room Ventilation Ductwork Breached During Replacement of Temperature Transmitter," for the Dresden Nuclear Power Station (DNPS). This event is being reported in accordance with 10 CFR 50.73(a)(2)(v)(D), "Any event or condition that could have prevented the fulfillment of the safety function of structures or systems that are needed to mitigate the consequences of an accident."

Corrective Actions:

The model work order was revised to include a caution related to the impairment of the control room boundary.

Maintenance work planners will be trained on the use of the barrier control program procedure.

Signs were placed in the area to make individuals aware of the risk to the control room HVAC system. Additionally, a walkdown was performed, to identify additional access doors that may require signs.

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

Respectfully,

for 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

NRC FORM 366 (7-2001) U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB NO. 3150-0104 EXPIRES 7-31-2004

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.

LICENSEE EVENT REPORT (LER)

1. FACILITY NAME	2. DOCKET NUMBER	3. PAGE
Dresden Nuclear Power Station Unit 2	05000237	1 of 3

4. TITLE Control Room Ventilation Ductwork Breached During Replacement of Temperature Transmitter

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
									Dresden	05000249
05	31	2002	2002	– 004	– 00	07	30	2002	FACILITY NAME N/A	DOCKET NUMBER N/A

9. OPERATING MODE	1
10. POWER LEVEL	100

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)		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)
	20.2203(a)(2)(ii)		50.36(c)(2)		50.73(a)(2)(v)(B)	OTHER
	20.2203(a)(2)(iii)		50.46(a)(3)(ii)		50.73(a)(2)(v)(C)	Specify in Abstract below or in NRC Form 366A
	20.2203(a)(2)(iv)		50.73(a)(2)(i)(A)	X	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	TELEPHONE NUMBER (Include Area Code)
Timothy P. Heisterman	(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

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

15. EXPECTED SUBMISSION DATE	MONTH	DAY	YEAR

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

On May 28 2002, instrument maintenance (IM) personnel were performing a calibration of the main control room heating ventilation and air conditioning (HVAC) supply air temperature instrumentation. During the performance of the calibration, it was determined that the temperature transmitter had failed. The transmitter was located in the control room supply air duct. A work order was generated to replace the failed temperature transmitter. On May 31, 2002, maintenance personnel proceeded to replace the failed transmitter. A supply duct access door was opened to replace the transmitter. The opening of this access door resulted in the control room ventilation system being inoperable. The root cause of the event was determined to be ineffective change management during the implementation of the plant barrier control program, which resulted in a knowledge deficiency. The access door was sealed and smoked tested. The model work order was revised to include a caution related to the impairment of the control room boundary. Additionally, a walkdown was performed, to identify additional access doors that may require signs. Signs were placed in the area to make individuals aware of the risk to the control room HVAC system. Maintenance work planners will be trained on the use of the barrier control program procedure. The control room envelope was breached for approximately 20 minutes. During this time there were no movement of irradiated fuel nor was there a potential to drain the vessel. Due to the short period of time that the access door was open, the probability of an occurrence which would have required the initiation of the Control Room Emergency Ventilation system was low. At no time did this condition compromise the health and safety of the public.

A. Plant Conditions Prior to Event:

Unit: 02 (03) Event Date: 05-31-2002 Event Time: 0930 CST
Reactor Mode: 1 (1) Mode Name: Run (Run) Power Level: 98 percent (100)
Reactor Coolant System Pressure: 1003 psig (1001 psig)

B. Description of Event:

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

On May 28 2002, instrument maintenance (IM) personnel were performing a calibration of the main control room heating ventilation and air conditioning (HVAC) [VI] supply air temperature instrumentation. During the performance of the calibration, it was determined that the temperature transmitter had failed. The transmitter was located in the control room supply air duct. A work order was generated to replace the failed temperature transmitter. On May 31, 2002, maintenance personnel proceeded to replace the failed transmitter. A supply duct access door was opened to replace the transmitter. The door was opened for approximately 20 minutes to perform the activity.

Following the maintenance activity on June 3, 2002, an IM supervisor consulted the HVAC maintenance supervisor regarding reinstallation of the insulation that had been removed from the ductwork. The IM and HVAC supervisors went to the area to assess the reinstallation activity. Upon observing the access door, the HVAC supervisor realized that the boundary had been breached. The IM supervisor was informed that the access door was required to be sealed and leak tested. Engineering personnel were contacted concerning the issue and testing requirements. Operations management was informed that the control room envelope had been breached during the transmitter replacement on May 31, 2002. The access door was sealed and successfully leak tested.

The requirements regarding opening sizes in the control room envelope specify that the control room ventilation would be inoperable if openings exist that are greater than approximately 12.57 square inches. The duct access door that was used for the maintenance activity was approximately 144 square inches. In this condition, the control room in leakage limit would have exceeded requirements.

No other plant structures, systems, or components were inoperable that contributed to this event.

C. Cause of Event:

The investigation revealed that the work instructions did not explicitly state that the control room boundary would be impaired during the work activity. Based on the work instructions, IM technicians were aware that the access door had to be opened. Due to an assumption, the technicians believed that work package reviewers, both engineering and operation, understood that the access door was required to be opened. Therefore, this information was not conveyed to the operations supervisor.

The maintenance planner did not use the Plant Barrier Control Program procedure during package preparation due to a knowledge deficiency. The root cause of the event was determined to be ineffective change management during the implementation of the plant barrier control program. (NRC Cause Code E)

A contributor to this incident was the fact that IM activities typically do not impair barriers that would require the use of the barrier control process. Therefore, a knowledge deficiency existed on the part of the IM planners. This resulted in the work package not explicitly stating the barrier would be breached.

Another factor that contributed to this incident was that no signs or placards were in the area to alert individuals that the duct was a control room boundary.

D. Safety Analysis:

The control room envelope was breached during the replacement of a temperature transmitter. The maintenance activity required the access door to be open for approximately 20 minutes. During this time there were no movement of irradiated fuel nor was there a potential to drain the vessel. Due to the short period of time that the access door was open, the probability of an occurrence which would have required the initiation of the Control Room Emergency Ventilation system was low. At no time did this condition compromise the health and safety of the public.

E. Corrective Actions:

The model work order was revised to include a caution related to the impairment of the control room boundary.

Maintenance work planner will be trained on the use of the barrier control program procedure.

Signs were placed in the area to make individuals aware of the risk to the control room HVAC system. Additionally, a walkdown was performed, to identify additional access doors that may require signs.

F. Previous Occurrences:

LER 50-237/96-017: Control Room Ventilation System found outside design limits due to unsealed control room penetrations and breaches caused by management and modification process deficiencies.

G. Component Failure Data:

N/A