NRC Form 366
(9-83)

U.S. NUCLEAR REGULATORY COMMISSION
APPROVED OMB NO. 3150-0104
EXPIRES: 8/31/85

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
Dresden Nuclear Power Station, Unit 3	0 5 0 0 0 2 4 9	1 OF 0 2

TITLE (4)

Reactor Scram

EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAMES	DOCKET NUMBER(S)
									N/A	0 5 0 0 0
0 4	2 7	8 5	8 5	0 1 0	0 0	0 5	2 3	8 5	N/A	0 5 0 0 0

OPERATING MODE (9)	N	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)			
POWER LEVEL (10)	0 0 0	20.402(b)	20.405(c)	X 50.73(a)(2)(iv)	73.71(b)
		20.405(a)(1)(i)	50.36(c)(1)	50.73(a)(2)(v)	73.71(c)
		20.405(a)(1)(ii)	50.36(c)(2)	50.73(a)(2)(vii)	OTHER (Specify in Abstract below and in Text, NRC Form 366A)
		20.405(a)(1)(iii)	50.73(a)(2)(i)	50.73(a)(2)(viii)(A)	
		20.405(a)(1)(iv)	50.73(a)(2)(ii)	50.73(a)(2)(viii)(B)	
		20.405(a)(1)(v)	50.73(a)(2)(iii)	50.73(a)(2)(x)	

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER
	AREA CODE
Ronald Jackson (X-549)	8 1 5 — 9 4 2 - 2 9 2 0

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS	
X				N							

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

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

While the unit was in the shutdown mode, a full reactor scram was initiated from low water level with subsequent Group II and III isolations. Computer printout indicated that the scram was caused by low water level relays 590-105C & D which are de-energized by low water level sensors 263-58A & B upon exceeding their setpoint of plus 8 inches. However, the logs, charts, and computer printout verified the level as normal, 35 inches. Additionally, the level sensor's calibration was checked and verified correct.

During the investigation, it was found that 15 minutes prior to the scram the shutdown cooling system (SDC) was valved in and cooling water (RBCCW) flow was being adjusted. Past testing has shown that slight vibrations near the level sensor's rack (2203-6) may cause a spurious scram. If shutdown cooling is not filled or vented properly, then water hammer could occur in the RBCCW line to SDC and vibrate the 2203-6 rack. Therefore, it is possible that shutdown cooling was improperly filled and vented thus causing vibration of the 2203-6 rack which generated the reactor scram. A review of the unit NSO's log book and personnel interviews show that the SDC system was filled and vented prior to system startup. Since it cannot be determined if the shutdown cooling system was filled and vented properly, the exact cause of the event remains unknown.

Safety significance was minimal since all safety systems operated as designed during the scram. The last similar occurrence of this type was reported under LER 85-2 on Docket #050249.

IE22

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Dresden Nuclear Power Station, Unit 3	0 5 0 0 0 2 4 9	8 5	— 0 1 0	— 0 0	0 2 OF 0 2

TEXT *(If more space is required, use additional NRC Form 366A's)* (17)

While the unit was in the shutdown mode, there was a reactor scram from low water level with subsequent Group II and III isolations. In reviewing the computer printout, it indicated that the scram was caused by low water level relays 590-105C & D which are de-energized by the low water level sensors 263-58A & B upon exceeding their setpoint of plus 8 inches. However, the logs, charts, and computer printout showed no abnormal events at the time of the scram and that water level was well above plus 8 inches (35 inches).

The Instrument Maintenance Department checked the calibration of the sensors and found that they were correctly calibrated. Also, it was verified that there were no work activities in progress near the rack (2203-6) housing the level sensors. However, 15 minutes prior to the scram the shutdown cooling system was valved in and cooling water (RBCCW) flow was being adjusted. Past testing has shown that slight vibrations near the 2203-6 rack may cause a spurious scram. If shutdown cooling is not filled or vented properly, then water hammer could occur in the RBCCW line to SDC and vibrate the 2203-6 rack. Therefore, it is possible that shutdown cooling was improperly filled and vented, thus causing vibration of the 2203-6 rack which generated the reactor scram. A review of the unit NSO's log book and personnel interviews show that the SDC system was filled and vented prior to system startup. Since it cannot be determined if the shutdown cooling system was filled and vented properly, the exact cause of the event remains unknown.

In order to prevent vibration induced scrams and improper operation of the SDC system the following corrective actions will be taken:

1) Replace level sensors (263-58A & B) with analog trip units during the next Unit 3 refuel outage under modification M12-3-83-40 as per Environmental Qualification I.E. Bulletin 79-01B.

2) Retrain Equipment Attendents on filling and venting shutdown cooling system.

3) Procedural changes to DOP 1000-1, Fill and Vent Shutdown Reactor Cooling System, to ensure that the heat exchangers are filled and vented properly to prevent water hammer.

This event was of minimal safety significance since all safety systems operated as designed. The last similar occurrence of this type was reported under LER #85-2 on Docket #050249.

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May 23, 1985

DJS Ltr #85-569

U.S. Nuclear Regulatory Commission
Document Control Desk
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Licensee Event Report #85-010-0, Docket #050249 is being submitted as required by Technical Specification 6.6, NUREG 1022 and 10 CFR 50.73 (a)(2)(iv).

John W. Wujcik

for D.J. Scott
Station Manager
Dresden Nuclear Power Station

DJS/kjl

Enclosure

cc: J.G. Keppler, Regional Administrator, Region III
File/NRC
File/Numerical

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