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 2	0 5 0 0 0 2 3 7	1 OF 0 4

TITLE (4) Failure to Place Condenser Pit Level Switch LS-2-4441-24B in a Tripped Condition Due to Personnel Error

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 6	1 7	8 7	8 7	0 2 1	0 0	0 7	1 5	8 7	N/A	0 5 0 0 0

OPERATING MODE (9)		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)			
N		20.402(b)	20.405(c)	50.73(a)(2)(iv)	73.71(b)
POWER LEVEL (10)		20.405(a)(1)(i)	50.36(c)(1)	50.73(a)(2)(v)	73.71(c)
0 7 8		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)	X 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
Jerry F. Lizalek Technical Staff Engineer (X-421)	AREA CODE 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	

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)

At 1330 hours on June 17, 1987, while Dresden Unit 2 was operating at 78% rated thermal power, it was discovered that main condenser high-high level switch LS-2-4441-24B had not been placed in the tripped condition after being found inoperable during surveillance testing. Although Technical Specification (T.S.) 3.5.L.2 requires this action, the Station Control Room Engineer (SCRE) failed to recognize this when informed of the level switch failure on June 16, 1987. As a result, the switch was not placed in a tripped condition until 26 hours and 45 minutes after it was discovered inoperative. Safety significance was minimal since the redundant pair of main condenser pit high-high level switches were operable, and would have tripped the circulating water pumps at the five foot level as required by T.S. 4.5.L.1.c. Additional switches would have provided Control Room alarms at the one and three foot levels. Corrective actions include review of this event with appropriate personnel and procedure changes to clarify T.S. requirements.

A previous event involving failure of a similar type level switch is listed in Reportable Occurrence 86-027 on Docket 50-237.

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FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Dresden Nuclear Power Station, Unit 2	0 5 0 0 0 2 3 7	8 7	— 0 2 1	— 0 0	0 2 OF 0 4

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

PLANT AND SYSTEM IDENTIFICATION:

General Electric Boiling Water Reactor - 2527 MWt rated core thermal power. Energy Industry Indification System (EIIS) codes are identified in the text as [XX].

EVENT IDENTIFICATION:

Main condenser pit high-high level switch [SG] failed to alarm in the Control Room during performance of Dresden Instrument Surveillance (DIS) 4400-1 due to a broken magnetrol level switch lead. The switch was then inadvertently not placed in the tripped condition as required by Technical Specification 3.5.L.2 due to personnel error.

A. CONDITIONS PRIOR TO EVENT:

Dresden Unit: 2 Event Date: June 17, 1987 Event Time: 1330 Hours

Reactor Mode: N Mode Name: Run Power Level: 78%

Reactor Coolant System (RCS) Temperature: 545°F

B. DESCRIPTION OF EVENT:

At 1330 hours on June 17, 1987, while Dresden Unit 2 was operating at 78% rated thermal power, it was discovered that main condenser high-high level switch LS-2-4441-24B had not been placed in the tripped condition after being found inoperative during surveillance testing. Technical Specification 3.5.L.2 requires that the condenser pit level switches trip the circulating water pumps and alarm in the Control Room if water level in the condenser pit exceeds a level of five feet above the pit floor. If one of these trip and alarm circuits fail, then the failed circuit is to be placed in the tripped condition. If these conditions cannot be met, and the unit is operating, the reactor must be taken to cold shutdown within 24 hours.

While performing Dresden Instrument Surveillance (DIS) 4400-1 (Condenser Pit High-High Water Level Switch Calibration Check) at 1115 hours on June 16, 1987, Level Switch LS-2-4441-24B did not activate the Control Room alarm. The Instrument Maintenance (IM) Technician performing the surveillance informed his Foreman of the problem, who initiated a Deviation Report describing the event and carried it to the Station Control Room Engineer (SCRE). Although the Deviation Report referenced Technical Specification 4.5.L.1.c, which states the surveillance testing requirements, it did not reference Technical Specification 3.5.L.2, which requires placing the switch in the tripped condition. When reviewing the Deviation Report, the SCRE failed to recognize that tripping the switch was required. When the fact that the switch had not been tripped was discovered on June 17, it was tripped and this Licensee Event Report was initiated.

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Dresden Nuclear Power Station, Unit 2	0 5 0 0 0 2 3 7	8 7	— 0 2 1	— 0 0	0 3 OF 0 4

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

C. APPARENT CAUSE OF EVENT:

Investigation by the IM Department found that Magnetrol main condenser high-high Level Switch LS-2-4441-24B had a broken lead which prevented the activation of the Control Room alarm. The root cause of the broken lead was attributed to age and vibration. This equipment performed satisfactorily during the last surveillance on March 14, 1987.

D. SAFETY ANALYSIS OF EVENT:

The main condenser pit high-high level switches are designed to trip the circulating water pumps during postulated failure of main condenser components releasing circulating water to the condenser pit. This automatic trip of the circulating water pumps would then prevent or mitigate the consequences of flooding of the condensate pump room. The safety significance of this event was minimal since the redundant pair of condenser high-high level switches were operable. In addition, the high-high level switch trips serve as a backup to Operator-required actions based upon alarms generated by separate level switches at the one foot and three foot levels.

E. CORRECTIVE ACTIONS:

Upon identification of the error, a priority work request was written to place the failed circuit in a tripped condition. This was accomplished by 1400 hours on June 17, 1987, or 26 hours and 45 minutes following initial discovery of the inoperative alarm circuit. Discussions were held with the IM personnel and the SCRE to determine the root cause of the event and to emphasize the need for clear communications between work groups and thorough review of Technical Specification items. The following additional corrective actions were initiated to prevent future recurrence of this type of event:

1) DIS 4400-1 will be revised by the IM Department to explicitly state that any failure in the high-high level switch trip and alarm circuitry constitutes entering a limiting condition for operation and that the SCRE shall be notified immediately. Also, a step will be included that adds instructions on how to put the circuit in the tripped condition as required by the Technical Specification.

2) A memo from the Assistant Superintendent of Operations will be issued to all licensed management personnel describing the event, clarifying the applicable Technical Specification, and emphasizing the need for thorough reviews of Technical Specifications associated with Deviation Reports.

3) Dresden Administrative Procedure (DAP) 2-8, Deviation Reporting, is being revised to require that all Deviation Reports be reviewed by the SCRE for Technical Specification requirements. This revision will also clarify that any individual initiating a Deviation Report is to notify an Operating Shift Supervisor.

4) A review of this event will be presented to Operations personnel attending the routine six-week Operator training schedule.

5) The IM Department will review other similar procedures and revise as appropriate to clarify Technical Specification impact.

6) This event was presented in the all station tailgate on June 22, 1987.

7) The Station Manager discussed the event with the SCRE involved.

F. PREVIOUS EVENTS:

Reportable Occurrence 86-027 on Docket #050237 describes a problem with a condensate pump room level switch. Corrective action taken was to repair the level switch.

G. COMPONENT FAILURE DATA:

Component Name: Magnetrol Main Condenser Pit High-High Level Switch LS-2-4441-24B

Model No: 249-CX-EP/VP

This component is not reportable to the Nuclear Plant Reliability Data System (NPRDS).

Commonwealth Edison
Dresden Nuclear Power Station
R.R. #1
Morris, Illinois 60450
Telephone 815/942-2920

July 15, 1987

EDE LTR #87-465

U.S. Nuclear Regulatory Commission
Document Control Desk
Washington, D.C. 20555

Licensee Event Report #87-021-0, Docket #050237 is being submitted as required by Technical Specification 6.6, NUREG 1022 and 10 CFR 50.73(a)(2)(i)(B).

E.D. Eenigenburg
Station Manager
Dresden Nuclear Power Station

EDE/kjl

ENclosure

cc: A. Bert Davis, Regional Administrator, Region III
File/NRC
File/Numerical

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