



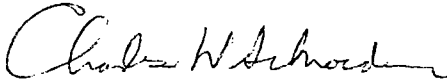
Commonwealth Edison
Dresden Nuclear Power Station
R.R. #1
Morris, Illinois 60450
Telephone 815/942-2920

April 28, 1992

CWS LTR #92-236

U.S. Nuclear Regulatory Commission
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Licensee Event Report 92-11, Docket 050237 is being submitted as required by Technical Specification 6.6, NUREG 1022 and 10 CFR 50.73(a)(2)(iv).


Charles W. Schroeder 5/6/92
Station Manager
Dresden Nuclear Power Station

CWS/dal

Enclosure

cc: A. Bert Davis, Regional Administrator, Region III
NRC Resident Inspector's Office
File/NRC
File/Numerical

(ZDVR/570)

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LICENSEE EVENT REPORT (LER)

Form Rev 2.0

Facility Name (1) Dresden Nuclear Power Station, Unit 2 Docket Number (2) 0 5 10 10 10 12 13 17 Page (3) 1 of 0 5

Title (4) Unplanned 'A' Standby Gas Treatment System Auto-Start 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)
0	4	09	92	011	00	0	4	28	Dresden Unit 3	051010121419

OPERATING MODE (9)	N	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10CFR (Check one or more of the following) (11)								
		20.402(b)	20.405(c)	X	50.73(a)(2)(iv)	73.71(b)				
POWER LEVEL (10)	099	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)				
		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: Mark Blakemore, Technical Staff System Engineer Ext. 2421
 TELEPHONE NUMBER: AREA CODE 815 942 -2920

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

CAUSE	SYSTEM	COMPONENT	MANUFAC-TURER	REPORTABLE TO NPRDS		CAUSE	SYSTEM	COMPONENT	MANUFAC-TURER	REPORTABLE TO NPRDS	

SUPPLEMENTAL REPORT EXPECTED (14)

Expected Submission Date (15) Yes (If yes, complete EXPECTED SUBMISSION DATE) X NO

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

On April 9, 1992 at 2230 hours, with Unit 2 at 99% power and Unit 3 in a refuel outage, the Instrument Maintenance Department was conducting Dresden Instrument Maintenance Surveillance (DIS) 7500-01, Standby Gas Treatment (SBGT) Auto Actuation. During performance of the surveillance, an error occurred concerning configuration of certain SBGT logic fuses. Consequently, an unexpected 'A' SBGT train auto-start occurred.

On April 10, 1992 at 0130 hours, the Reactor Building Ventilation System (RBVS) failed to isolate and the 'B' SBGT train failed to automatically start during continued performance of DIS 7500-01. The 'A' SBGT train automatically started from low flow on the 'B' train. To help troubleshoot the problem, an initiation signal was simulated on Reactor Building Ventilation Exhaust High radiation and all systems functioned as expected. The applicable portions of DIS 7500-01 were promptly performed twice to verify proper operation of the isolation logic and both times all components operated as expected. Additional testing was also performed by the Electrical and Instrument Maintenance Departments to ensure operability of SBGT.

The cause of the these events was attributed to personnel error on the part of the Instrument Maintenance and Operations personnel involved for not adequately self-checking to ensure that they were clearly performing the right steps of the procedure. The unplanned 'A' SBGT System train start and RBVS isolation signals had no effect on plant status. A previous event involving an unplanned Engineered Safety Feature (ESF) actuation due to personnel error was reported by LER 91-004/050249.

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TEXT Energy Industry Identification System (EIIS) codes are identified in the text as [XX]

The 'A' train was started several additional times in accordance with DIS 7500-01. The 'A' train was left running and the IMs and Operator took a lunch break at step 51 of the procedure after the Operator returned to panel 2223-28B to install fuse FU-3. After lunch, the IM in the Control Room stated that the Operator who had reinstalled fuse FU-3 should remain in the area to remove the same fuses several steps later. The Control Room and field IMs requested the Operator to install fuse FU-3 per step 51 of the procedure. The NSO placed 'A' SBTG to off and reset the RBV system. The IMs requested the NSO to place 'B' SBTG in PRIMARY, and 'A' SBTG in STANDBY per step 57 of the procedure. The IMs reached step 59 (remove fuse FU-3 located on TB-1 at local panel 2223-28A). The Control Room IM read step 59 and believed it required fuse FU-3 in panel 2223-28B TB-1 to be removed again. The IM at the panel also read step 59 and also believed it required the same fuse to be removed. He instructed the Operator to remove the same fuse he had installed a few steps earlier. The Operator did not read step 59 and followed the IM's instruction. Removing fuse FU-3 in panel 2223-28A prevents relays 2/3-5741-30K1, -30K3 and -30K24 from energizing, thus blocking the 'A' train logic from automatically isolating RBV upon an initiation signal while testing the 'B' train logic. When the NSO provided an initiation signal by removing fuses 595-704A and -704B per step 60 of the procedure, the 'B' train, which was in PRIMARY, failed to start. The 'A' train, which was in STANDBY, subsequently started on 'B' train low flow after an approximately 20 second time delay as designed. The SCRE declared the 'B' SBTG train inoperable and logged it in the degraded equipment log. The IMs and the non-licensed Operator immediately reviewed the procedure and realized the wrong fuse had been removed. The removal of Fuse FU-3 in panel 2223-28B prevented an initiation of 'B' SBTG and the isolation of RBV from the 'B' SBTG logic. Fuse FU-3 in panel 2223-28A should have been removed per step 59 of the procedure. RBV consequently isolated from the 'A' train logic. Fuse FU-3 in panel 2223-28B was replaced and the SBTG system was returned to normal. The SCRE suspended further performance of DIS 7500-01 pending additional investigation into the incident. The RBV and SBTG systems were returned to normal. All steps in the procedure, as well as the electrical drawings, were reviewed to ensure that the SBTG system was operable. The 'A' level IM from shift 3 discussed the event with the incoming shift 1 'A' level IM. They inventoried the relay block kit utilized to insure all blocks had been removed from the system. The IMs decided that the failed portion of the procedure should be performed again. The decision was made to start at step 53 (request NSO to reset RBV) then go to step 3 (block relays 595-105A and 595-105C) to prevent an unnecessary Primary Containment Group III isolation [JM] of the Shutdown Cooling System [BO] and Reactor Water Cleanup System [CE]) before resuming the procedure. The IMs conducted a prejob briefing before reporting to the Control Room. All the steps taken to return SBTG to normal were also reviewed and found to be acceptable. Also, the configuration of panels 2223-28B and -29B were inspected and found to be correct. The 'B' SBTG system was placed in PRIMARY and 'A' SBTG was placed in STANDBY.

Interviews indicate the IM at the local panel 2223-28A then requested the non-licensed Operator to remove fuse FU-3 on TB-1. The NSO in the Control Room, under the direction of the IM, then proceeded to remove fuses 595-704A and -704B. RBV failed to isolate and the 'B' SBTG system failed to start automatically. The 'A' SBTG system automatically started on low system flow on the 'B' SBTG train. After reviewing the procedure, the SCRE and the Control Room IM believed that the SBTG logic did not receive the initiation signal and decided to initiate the SBTG by applying a simulated RBV system High Radiation signal. All systems functioned as expected. The applicable section of DIS 7500-01 was then performed twice to verify proper operation of the isolation logic, and both times all components operated as expected. The surveillance was continued and completed at 0351 hours.

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DIS 7500-01 was performed again on April 11, 1992. A review of the second event concluded that if the fuse was properly replaced, the only cause could be intermittent failure of contacts 5-6 on relay 595-134, but subsequent testing does not support contact problem as the likely cause. The Electrical Maintenance Department (EMD) observed the surveillance in an attempt to determine the cause of this second event. The previous failure could not be repeated.

C. APPARENT CAUSE OF EVENT:

This report is being submitted in accordance with 10CFR50.73(a)(2)(iv), which requires the reporting of any event or condition that results in unplanned manual or automatic actuation of any Engineered Safety Feature (ESF).

Applicable portions of (DIS) 7500-01 were performed again on April 11, 1992, along with EMD monitoring relay contact operation to determine the cause of the second event. The following relays were checked: Relay 595-134 and 595-135 on Control Room panel 903-4, Relays 595-104A and 595-104C on Control Room panel 903-15, and Relays 595-104B and 595-104D on Control Room panel 903-17. Also, the fuseholder and FU-3 in local panel 2223-28B were checked for damage and loose connections. The EMD, along with the IMD, verified contacts on the above relays operated properly and exhibited no voltage drop across closed contacts. The EMD also verified that fuse FU-3 in local panel 2223-28B exhibited a solid contact with the fuse holder. All components functioned properly, and the failure to start could not be repeated.

The cause of the unplanned 'A' SBTG auto start was attributed to personnel error on the part of the IM in the Control Room, the IM at the local panel and the Operator at the local panel for not adequately self-checking to ensure that they were clearly performing the right steps of the procedure. Also the contributing cause was the lack of a pre-job briefing on the surveillance.

The cause of the second event is unknown, but it is possible that the fuses were inadvertently not configured per the procedure and this would explain what happened during this event.

D. SAFETY ANALYSIS OF EVENT:

The purpose of the SBTG system is to maintain a small negative pressure in the Reactor Building in order to prevent the ground level release of airborne radioactivity under RBV isolation conditions. This is accomplished by treating the effluent from the Reactor Building and discharging it through the Unit 2/3 chimney. The unplanned 'A' SBTGS train start and RBVS isolation signals had no effect on plant status.

E. CORRECTIVE ACTIONS:

1. An April 15, 1992, special tailgate session has been given regarding the event.
2. Additional testing was performed by the Electrical and Instrument Maintenance Departments to ensure operability of SBTG.
3. The personnel involved were counselled by Station Management.
4. The IM Foreman was disciplined for not conducting a pre-job briefing (HLA) with the work crew.

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F. PREVIOUS OCCURRENCES:

LER/DOCKET NUMBERS TITLE

91-004/050249 Unplanned SBGTS Auto-Start During Area Radiation Monitor Calibration Due to Personnel Error

While performing Dresden Instrument Surveillance (DIS) 1800-2, an Instrument Maintenance technician mistakenly disconnected a cable supplying an indicator trip unit associated with the Channel 'A' Fuel Pool Radiation Monitor. This caused a RBVS isolation and SBT automatic start. The cable was reconnected, the RBVS was reset, and the SBT was secured. The Instrument Maintenance technician was counselled by the Instrument Maintenance Supervisor to reinforce the need to always self-check.

G. COMPONENT FAILURE DATA:

This section is not applicable because no component failure occurred.