

LICENSEE EVENT REPORT (LER)

Form Rev 2.0

Facility Name (1) Dresden Nuclear Power Station, Unit 2	Docket Number (2) 0 15 10 10 10 12 13 17	Page (3) 1 of 0 4
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Title (4)
Unexpected Power Increase Upon Entering the Remote Load Following Mode Due to Procedure Deficiency

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	3	1	4	8	9	8	9	8	9	0	0	8	0	0	0	0	4	1	3	8	9	N/A	0	5	10	10	10	1	1
OPERATING MODE (9)										THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10CFR (Check one or more of the following) (11)																			

POWER LEVEL (10) 0 9 4	<input type="checkbox"/> 20.402(b)	<input type="checkbox"/> 20.405(c)	<input type="checkbox"/> 50.73(a)(2)(iv)	<input type="checkbox"/> 73.71(b)
	<input type="checkbox"/> 20.405(a)(1)(i)	<input type="checkbox"/> 50.36(c)(1)	<input type="checkbox"/> 50.73(a)(2)(v)	<input type="checkbox"/> 73.71(c)
	<input type="checkbox"/> 20.405(a)(1)(ii)	<input type="checkbox"/> 50.36(c)(2)	<input type="checkbox"/> 50.73(a)(2)(vii)	<input type="checkbox"/> Other (Specify in Abstract below and in Text)
	<input type="checkbox"/> 20.405(a)(1)(iii)	<input checked="" type="checkbox"/> 50.73(a)(2)(i)	<input type="checkbox"/> 50.73(a)(2)(viii)(A)	
	<input type="checkbox"/> 20.405(a)(1)(iv)	<input type="checkbox"/> 50.73(a)(2)(ii)	<input type="checkbox"/> 50.73(a)(2)(viii)(B)	
	<input type="checkbox"/> 20.405(a)(1)(v)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(x)	

LICENSEE CONTACT FOR THIS LER (12)

Name J. W. Boyar, Technical Staff Systems Engineer	Ext. 2605	TELEPHONE NUMBER AREA CODE 8 1 5 9 4 2 - 2 9 2 10
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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) NO

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

At 0912 hours on March 14, 1989, with Unit 2 at 94% rated core thermal power, the Nuclear Station Operator (NSO) placed the reactor Recirculation System in the master automatic mode and entered the remote Economic Generation Control (EGC) load following mode as requested by the System Load Dispatcher. The NSO then observed generator load had increased to 805 MWe, which exceeded the 780 MWe selected upper generator load limit by 25 MWe. The NSO then immediately removed the Unit from the EGC mode and reduced power by manually lowering reactor recirculation flow. Although core flow increased to slightly above the 100% Technical Specification 3.3.G limit during this event, safety significance was minimal as maximum core thermal power and other nuclear fuel limits were not exceeded. This was the first occurrence in which 100% core flow was exceeded while operating in the EGC mode.

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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

C. APPARENT CAUSE OF EVENT:

This event is being reported in accordance with 10CFR50.73(a)(2)(i)(B), which requires the reporting of any operation prohibited by the plant's Technical Specifications. Technical Specification 3.3.G, Economic Generation Control, states: "Operation of the Unit with the Economic Generation Control System with automatic flow control shall be permissible only in the range of 65 - 100% of rated core flow, with reactor power above 20%". Core flow briefly exceeded 100% during this event.

Investigation and testing was performed by Instrument Maintenance, Operational Analysis, and Technical Staff personnel in accordance with Work Request 83139 and Special Procedure (SP) 89-4-43. This testing involved monitoring the output of the EGC controller under a simulated input signal with the EGC System electrically isolated. Further testing was then performed in order to pinpoint the effect of rapid completion of the EGC entry sequence. It was then determined that if entry into the EGC mode is performed immediately following placing the reactor recirculation flow control into master automatic, insufficient time for stabilization may result in overshoot of the preselected upper generator load limit. As DOP 5670-1 did not include guidance regarding stabilization time, the root cause of this event was attributed to procedure deficiency.

D. SAFETY ANALYSIS OF EVENT:

The safety significance of this event was minimal as the maximum core thermal power and nuclear fuel thermal limits were not violated. The NSO responded to the unexpected overshoot of the preselected upper generator load limit by removing the Unit from the EGC mode and reducing core flow below 100%. Had the unexpected overshoot occurred at a higher power level or not been promptly corrected by operator action, the reactor recirculation pump motor generator (MG) sets would have been limited by their electrical and mechanical stops, which would have prevented exceeding 110% core flow.

E. CORRECTIVE ACTIONS:

Immediate corrective actions included removal of the Unit from the EGC mode and a manual power reduction. Use of the EGC System was suspended on Dresden Units 2 and 3 and the Unit 2 EGC System was electrically isolated. Testing and repairs were then performed under Work Request 83139 and SP 89-4-43.

Additional corrective actions to prevent recurrence included the following.

1. The Technical Staff Systems Engineer will revise DOP 5670-1 to include precautions regarding stabilization time and require close monitoring for any generator load limit overshoot during the EGC entry sequence. The revision will also require selecting a computer generated alarm to provide annunciation prior to exceeding the preselected generator load limits (237-200-89-05901). Reactor recirculation flow control system operation procedure DOP 202-3 will also be reviewed for similar precautions (237-200-89-05902).
2. The Technical Staff Systems Engineer will prepare a letter summarizing this event for issuance to all Licensed Operators (237-200-89-05903).

Operation of the EGC system will not be permitted until the above mentioned corrective actions have been completed.

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F. PREVIOUS OCCURRENCES:

Although there have been no previous events involving violation of the Technical Specification 3.3.G 100% core flow limit, an unexpected Unit 3 generator load decrease during EGC operation was reported by Deviation Report 12-3-89-2. Corrective action included attaching a multi-point recorder to attempt to pinpoint the cause, which was attributed to controller saturation.

G. COMPONENT FAILURE DATA:

As no component failures occurred during this event, this section is not applicable.



Commonwealth Edison

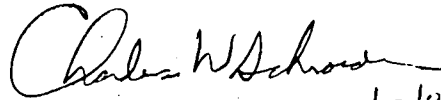
Dresden Nuclear Power Station
R.R. #1
Morris, Illinois 60450
Telephone 815/942-2920

April 13, 1989

EDE LTR #89-307

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

Licensee Event Report #89-008-0, Docket #050237 is being submitted as required by Technical Specification 6.6, NUREG 1022 and 10 CFR50.73(a)(2)(i)(B).



E.D. Eenigenburg 4/13/89
Station Manager
Dresden Nuclear Power Station

EDE/ade

Enclosure

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

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