

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1): LaSalle County Station Unit 2										DOCKET NUMBER (2): 0 5 0 0 0 3 1 7 4										PAGE (3): 1 OF 3	
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TITLE (4): Temporary Voltage Degradation During 237X Transformer Failure											
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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 NUMBERS		
06	25	85	85	034	00	07	25	85				0 5 0 0 0		
												0 5 0 0 0		

OPERATING MODE (9): 4		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 6 (Check one or more of the following) (11):														
POWER LEVEL (10): 900	20.402(a)				20.406(c)				<input checked="" type="checkbox"/> 60.73(a)(2)(iv)				73.71(b)			
	20.406(a)(1)(i)				60.30(a)(1)(i)				<input type="checkbox"/> 60.73(a)(2)(v)				73.71(a)			
	20.406(a)(1)(ii)				60.70(a)(2)				<input type="checkbox"/> 60.73(a)(2)(vi)				OTHER (Specify in Abstract below and in Text: NRC Form 366A)			
	20.406(a)(1)(iii)				60.73(a)(2)(i)				<input type="checkbox"/> 60.73(a)(2)(vii)(A)							
	20.406(a)(1)(iv)				60.73(a)(2)(ii)				<input type="checkbox"/> 60.73(a)(2)(vii)(B)							
20.406(a)(1)(v)				60.73(a)(2)(iii)				<input type="checkbox"/> 60.73(a)(2)(viii)								

LICENSEE CONTACT FOR THIS LER (12): James J. Hietala, extension 499										TELEPHONE NUMBER: AREA CODE: 815 357-6764									
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COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13):									
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC
X	EC	XFRMR	G080	Y					

SUPPLEMENTAL REPORT EXPECTED (14): <input type="checkbox"/> YES (If yes, complete EXPECTED SUBMISSION DATE) <input checked="" type="checkbox"/> NO										EXPECTED SUBMISSION DATE (15): MONTH: DAY: YEAR:		
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ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single space typewritten lines) (16):

At 1506 hours on June 25, 1985, a large overcurrent on a 4200/480 volt transformer (EC) at switchgear 237X occurred, causing a low voltage transient on the 4200 volt bus. The unit was shut down, therefore all 4200 volt busses were being supplied from the System Auxiliary Transformer, and all 4200 volt busses were effected. An overcurrent protective relay at switchgear 241X tripped the supply breaker for switchgear 237X. The high current caused a small electrical fire at the 237X switchgear. Station personnel quickly put out the fire. The voltage transient caused a Group I Primary Containment Isolation (JM), a Reactor Recirculation Motor Generator (AD) output breaker trip, and a shutdown of the Reactor Building Ventilation (NG) system. The cause of the overcurrent was an insulator flashover on the high voltage side of the transformer due to a dirty insulator. Immediate corrective action was to restart the Reactor Recirculation pump, and to restart the Reactor Building Ventilation system. Work Requests were written to repair the transformer installation. The Unit 1 installation was inspected for a similar problem.

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

APPROVED OMR NO 3150-0104

EXPIRES 8/31/85

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (3)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
LaSalle County Station Unit 2	050003714	85	034	00	02	OF	03

TEXT (If more space is required, use additional NRC Form 365A's) (17)

I. EVENT DESCRIPTION

At 1506 hours on June 25, 1985, a large overcurrent on a 4200/480 volt transformer at switchgear 237X (EC) occurred, causing a low voltage transient on the 4200 volt bus. The unit was shut down, therefore all 4200 volt busses (241X, 241Y, 242X, 242Y, and 243) were being supplied from the System Auxiliary Transformer, and all 4200 volt busses were effected. An overcurrent protective relay at switchgear 241X tripped the supply breaker for switchgear 237X. The high current caused a small electrical fire at the 237X switchgear. Station personnel quickly put out the fire. Based on alarm typer printouts, it is estimated that the voltage transient lasted approximately 50 milliseconds. Approximately 100 alarm conditions registered on the alarm typer during the transient, however, most alarms were caused by low voltage to the alarm circuitry, and did not reflect actual conditions. Significant actions that occurred during the event were the following: A Group I Primary Containment Isolation (JM), Reactor Recirculation (AD) Motor Generator Set output breaker tripped, and the Reactor Building ventilation (NG) system isolated. Operating Department personnel returned the plant to normal shutdown operation with no equipment problems found. The supply breaker to switchgear 237X was taken out-of-service. This breaker feeds blast coils for the Turbine Building and Reactor Building ventilation systems. Since the blast coils are not in use during the summer, removing the supply breaker from service had no effect on plant operation.

II. CAUSE

The cause of the overcurrent was an insulator flashover on the high voltage side of the transformer. Station Electrical Engineering Department investigated the failure, and determined that the flashover was due to a dirty insulator. The relatively high humidity condition in the area is considered to be a contributing factor. Station Electrical Engineering does not believe the problem is design related or a generic type of problem. The transformer is a General Electric 4200/480 volt dry-type 200 KVA switchgear transformer.

The alarms were caused by the low voltage de-energizing normally energized alarm relays. The alarms reset when the voltage returned to normal. The Reactor Recirculation Motor-Generator output breaker tripped because the low voltage affected the power supply for the generators voltage regulator. The breaker tripped on a loss of power to the voltage regulator. Reactor Building ventilation tripped off due to various normally-open dampers going closed. The dampers are AC powered with seal-in circuitry maintaining the dampers open. The low voltage de-energized the seal-in circuitry and the dampers went closed.

The Primary Containment Group I isolation (A Group I isolation closes Main Steam Isolation Valves, and Main Steam Line Drain Isolation Valves.) was caused by the low-voltage de-energizing leak detection normally-energized relays, thus causing the Group I isolation.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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

III. PROBABLE CONSEQUENCES OF THE OCCURRENCE

The voltage drop that occurred, did not affect all three phases in the same proportion. Because of that, the undervoltage trips did not occur, since the undervoltage relays must sense low voltage between both A and B phases, and low voltage between B and C phases. If the plant had been operating at power, the event would have been less significant. The 241X switchgear would have been supplied by the Unit Auxiliary Transformer and the voltage transient would not have effected the 241Y, 242X and 242Y busses, as they would have been supplied by the System Auxiliary Transformer. Systems that were effected by the event, operated as designed.

IV. CORRECTIVE ACTIONS

Immediate corrective action was to restart the Reactor Recirculation pump, and to restart the Reactor Building ventilation system. Work Requests L49848 and L49849 were written to repair the transformer. Unit 1 switchgear 137X and 137Y transformer installations were inspected for similar problems. Based on Station Electrical Engineering Department's investigation, this is not a generic problem, and no further action is presently planned.

V. PREVIOUS OCCURRENCES

None.

VI. NAME AND TELEPHONE NUMBER OF PREPARER

James J. Hietala, 815/357-6761, extension 499.



Commonwealth Edison
LaSalle County Nuclear Station
Rural Route #1, Box 220
Marseilles, Illinois 61341
Telephone 815/357-6761

July 25, 1985

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

Dear Sir:

Reportable Occurrence Report #85-034-00, Docket #050-374 is being submitted to your office in accordance with 10CFR 50.73.

for R.D. Buijs
G. J. Diederich
Station Manager
LaSalle County Station

GJD/DRR/sga

Enclosure

xc: NRC, Regional Director
INPO-Records Center
File/NRC

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official

JUL 12 1985

✓ Tennessee Valley Authority
ATTN: Mr. H. G. Parris
Manager of Power and Engineering
500A Chestnut Street Tower II
Chattanooga, TN 37401

Gentlemen:

SUBJECT: REPORT NOS. 50-259/85-23, 50-260/85-23, AND 50-296/85-23

Thank you for your response of June 21, 1985, to our Notice of Violation issued on May 21, 1985, concerning activities conducted at your Browns Ferry facility under NRC Operating License Nos. DPR-33, DPR-52, and DPR-68. We have evaluated your response and found that it meets the requirements of 10 CFR 2.201. We will examine the implementation of your corrective actions during future inspections.

We agree that the procedures are part of the problem but as you noted in your response, training is also needed to correct the problem fully.

We appreciate your cooperation in this matter.

Sincerely,

Original Signed by

Roger D. Walker

Roger D. Walker, Director

Division of Reactor Projects

cc: ✓ J. A. Coffey, Browns Ferry Nuclear
Plant Site Director
✓ G. T. Jones, Plant Manager
✓ J. W. Anderson, Manager
Office of Quality Assurance
✓ K. W. Whitt, Chief, Nuclear Safety
Staff
✓ D. L. Williams, Jr., Supervisor
Licensing Section
✓ R. E. Rogers, Project Engineer

bcc: ✓ NRC Resident Inspector
✓ R. J. Clark, Licensing
Project Manager, NRR
✓ J. Heard, FEMA, Region IV
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