



**Commonwealth Edison**

Zion Generating Station  
Shiloh Blvd. & Lake Michigan  
Zion, Illinois 60089  
Telephone 708 / 746-2084

December 20, 1990

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

Dear Sir:

The enclosed Licensee Event Report number 90-014-00, Docket No. 50-304/DPR-48 from Zion Generating Station is being transmitted to you in accordance with the requirements of 10CFR50.73(a)(2)(iv), which requires a 30 day written report when any event or condition occurs that results in manual or automatic actuation of any Engineered Safety Feature.

Very truly yours,

*W. R. Kunch*  
for T. P. Joyce  
Station Manager  
Zion Generating Station

TPJ/dmg  
Enclosure: Licensee Event Report

cc: NRC Region III Administrator  
NRC Resident Inspector  
INPO Record Center  
CECo Distribution List

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PDR ADDCK 05000304  
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LICENSEE EVENT REPORT (LER)

Form Rev 2.0

Facility Name (1) Zion Generating Station  
 Title (4) Reactor Trip Breaker Tripped during Testing  
 Docket Number (2) 0 15 10 10 10 13 10 14  
 Page (3) 1 of 0 3

Event Date (5) 1 1 2 10 9 10 9 10  
 LER Number (6) 0 1 A  
 Report Date (7) 1 2 2 10 9 10  
 Other Facilities Involved (8)  
 Facility Names  
 Docket Number(s)

OPERATING MODE (9) 1  
 POWER LEVEL (10) 9 9 %  
 THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10CFR (Check one or more of the following) (11)  
 20.402(b) 20.405(c)  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  
 20.405(a)(1)(iii) 50.73(a)(2)(i) 50.73(a)(2)(viii)(A) in Abstract  
 20.405(a)(1)(iv) 50.73(a)(2)(ii) 50.73(a)(2)(viii)(B) below and in  
 20.405(a)(1)(v) 50.73(a)(2)(iii) 50.73(a)(2)(x) Text)

LICENSEE CONTACT FOR THIS LER (12)

Name Suzanne L. Mika  
 Telephone Number 7 0 8 7 4 6 -12 10 18 14  
 ext. 2323

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
				X					

SUPPLEMENTAL REPORT EXPECTED (14)

Expected Submission Date (15) X NO

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

On November 20, 1990 at 1651, the Equipment Operator tripped the Train B Reactor Trip Breaker while verifying the breaker position for PT-5, the Monthly Reactor Protection Logic Surveillance. The Shift Engineer and the Licensed Shift Supervisor visually inspected the breaker with the Equipment Operator after he racked it out but no abnormal conditions were found, so the breaker was racked back into its cubicle and closed. The breaker's trip time was retested and the results were acceptable. The position of the Train A Reactor Trip Breaker was also inspected and found satisfactory. The cause of this event was attributed to inadequate guidance on the method for verifying that the breaker was racked in. This event had no safety significance because the Reactor Protection circuitry would have still been able to operate as it was designed. PT-5 will be changed to include more specific instructions for verifying breaker position, and the proper means of verifying that the breakers are correctly racked in will be reviewed during the Equipment Operator Training program.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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		Year	///	Sequential Number	///	Revision Number				
Zion Generating Station	0   5   0   0   0   2   0   4	9   0	-	1   3   5	-	0   0	0   2	OF	0   3	
TEXT Energy Industry Identification System (EIIS) codes are identified in the text as [XX]										

A. CONDITION PRIOR TO EVENT

MODE 1 - Power OPs RX Power 98.7% RCS [AB] Temperature/ Pressure 558.4 °F/ 2235 psig

B. DESCRIPTION OF EVENT

On November 20, 1990 at 1651, while concluding the performance of PT-5 on the Unit 2 Train B Reactor Protection System, the Equipment Operator was locally verifying that Reactor Trip Breaker "B" was completely racked-in and both the breaker positioning lever and the breaker release latch, located on the left and right side of the breaker cubicle respectively, were engaged. When the Equipment Operator lifted the breaker positioning lever to verify that the breaker was racked-in, the breaker tripped. The Equipment Operator notified the unit operators who were performing PT-5 that Reactor Trip Breaker "B" had tripped. The Shift Engineer and the Licensed Shift Supervisor (LSS) went into the Reactor Trip Breaker Room to look at the breakers and they found that the breaker positioning lever was very stiff and hard to operate indicating to the Shift Engineer and the LSS that the breaker was not properly racked in to the connect position.

Since Bypass Breaker "B" was still racked in and closed, the Shift Engineer directed the Equipment Operator to rack out the "B" Reactor Trip Breaker to investigate the cause of its trip. After racking the breaker out of its cubicle and not finding any unusual indications, the Equipment Operator racked the breaker back into the cubicle and closed the breaker. When he checked the breaker positioning lever, the lever moved freely indicating that the breaker was correctly rack in to the connect position.

A section of PT-5 was re-performed to test the "B" Reactor Trip Breaker. The breaker tripped within 58 milliseconds which is well within the 100 millisecond acceptance criteria.

In addition, while the "A" Bypass Breaker was racked in and closed, the cubicle door for the "A" Reactor Trip Breaker was opened and the "A" Reactor Trip Breaker was verified to be properly racked in.

Technical Staff Special Procedure TSSP 121-90 was performed on the Train "B" Reactor Trip Breaker to investigate the operation of the breaker positioning lever. The test indicated that the lever can not be lifted above its normal position. The lever moves down and up freely below this position. The procedure showed that the degree of stiffness of the lever was caused by normal breaker movement within the cubicle when the breaker is fully racked in and would not affect the operability of the breaker. Tripping of the breaker using the lever depends on the pressure exerted by the Operator.

C. APPARENT CAUSE OF EVENT

The cause of this event was attributed to inadequate guidance on the method for verifying that the breaker was racked in. When the Equipment Operator manipulated the lever during his verification, the lever was moved far enough to hit the trip bar and cause the Reactor Trip Breaker to trip.

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D. SAFETY ANALYSIS OF EVENT

The Reactor Trip Breakers are designed to trip when the breaker positioning lever is depressed to prevent the breaker from being racked out while it is energized. The Reactor Trip Bypass breaker was racked in and closed during PT-5 so the unit did not trip when the Reactor Trip breaker tripped. There is no safety significance to this event because the Reactor Protection Equipment operated as it was designed.

E. CORRECTIVE ACTIONS

The spare Reactor Trip Breaker that is used by the training department in the Equipment Operator training class is not able to be racked into or out of the training cubicle. This breaker will be repaired and returned to the training department. (304-180-90-13501)

The instructional steps in PT-5 that require the Equipment Operator to verify that the Reactor Trip Breaker is properly racked into position will be changed to clarify what should be done to verify the breaker position. (304-180-90-13502)

The necessary steps that the Equipment Operator must perform to ensure that the Reactor Trip Breakers are properly racked into the cubicles will be reiterated in the Equipment Operator training program. (304-180-90-13503)

F. PREVIOUS EVENTS

A similar event occurred under LER 86-012-00 on Unit 1. The event was caused by the Reactor Trip Bypass Breaker not being fully racked into the cubicle preventing the cell switch interlocks from being made up. A Reactor Trip was caused by the event. The corrective actions for LER 86-012-00 would not have prevented LER 90-014-00 from occurring.

G. COMPONENT FAILURE DATA

None.