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)
Kewaunee Nuclear Power Plant	0 5 0 0 0 3 0 5	1 OF 0 2

TITLE (4)
Turbine and Reactor Trip Due to Improperly Wired Switch

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)
									NA	0 5 0 0 0
0 5	0 7	8 4	8 4	— 0 0 9	— 0 1	1 0	1 7	8 4		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)	X 50.73(a)(2)(iv)	73.71(b)
POWER LEVEL (10)	0 2 5	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, NRC Form 366A)
		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	TELEPHONE NUMBER
Thomas J. Vukovich - Plant Nuclear Engineer	AREA CODE 4 1 4 — 3 8 8 - 2 5 6 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	
A											

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 1917 on May 7, 1984, with the plant at 25% power following a refueling outage, a turbine and reactor trip was received while performing procedure RT-TB-54D, "Turbine Trip Mechanism Test". The trip occurred during step 4.3, "Thrust Bearing Trip Simulation". The operators performed the immediate actions in the Turbine and Reactor Trip Procedure and placed the plant in the Hot Shutdown operating mode.

The following evening an attempt was made to repeat the circumstances of the trip, at 0% power. Again the result was a turbine trip, but not a reactor trip.

Further investigation revealed the cause of the turbine trip was a pressure switch (PSI6158), wired incorrectly. The Pressure Switch was miswired during the performance of Instrument and Control Procedure, ICP 54.30, "Turbine Generator Motoring Protection Pressure Switches". The switch was returned to its normal configuration.

The Instrument and Control Technician who performed the work was cautioned on the significance of this event. This is considered an isolated occurrence and no further followup action is required.

The reactor protection system performed its required function, hence there was no impact on public health and safety.

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

At 1917 on May 7, 1984, with the plant at 25% power, a turbine (TRB) and reactor (RCT) trip occurred. The trip was a result of procedure RT-TB-54D, "Turbine Trip Mechanism Test", being performed. The trip occurred during a portion of the test, "Thrust Bearing Trip Simulation", that checks the thrust bearing trip device (38). The procedure calls for the thrust bearing trip test valve (TV) to be opened, thereby increasing the oil pressure to the thrust bearing trip device. The actual pressure the thrust bearing trip device trips at, is then recorded. Holding the test lever in the "Test" position prevents the thrust bearing trip. Another means of protection which receives an input from thrust bearing oil pressure results in a direct generator trip and subsequent turbine trip . This trip requires a two out of two logic, actuated by auto stop oil pressure below 45 psig (PS 16148) (PS) and thrust bearing oil pressure greater than 60 psig (PS 16157) (PS). While the operators were performing the "Thrust Bearing Trip Simulation", the thrust bearing oil pressure reached 60 psig and the generator and turbine tripped. The operators performed the immediate actions in the Turbine and Reactor Trip Procedures, (E-0-04), and placed the plant in the Hot Shutdown mode.

The following day, May 8, 1984, with the reactor at 0% power, the same test was again performed in an attempt to discover the reason for the previous trip. Again a generator and turbine trip was the result, but not a reactor trip.

Further investigation discovered reversed leads on PS16158. PS16158 measures auto stop oil pressure and trips at 45 psig. Leads AST 6-3 and AST 6-1 were connected backwards. This caused the pressure switch PS16158 to give a trip signal, therefore when the thrust bearing oil pressure reached 60 psig the generator and turbine tripped.

RT-TB-54D is performed monthly while at power. No trip had been experienced during the previous cycle, while performing this procedure.

The improper wiring of the Pressure Switch occurred during refueling when Instrument and Control Procedure 54.30, "Turbine and Generator Motoring Protection Pressure Switch", was performed. Discussion with the Instrument and Control man who performed the test revealed that he had lifted the two leads, AST6-3 and AST6-1, to perform the procedure. It is speculated that the two leads were reversed when the procedure was completed.

To preclude a recurrence of this type of event, I & C personnel were counseled on the significance of this event and the value of referring to logic and wiring diagrams and other material available to them to help fully understand the procedures they are performing.

No similar events of this type have been experienced. The reactor protection system performed it's required function, hence there was no impact on public health and safety.

NRC-84-168

WISCONSIN PUBLIC SERVICE CORPORATION

P.O. Box 1200, Green Bay, Wisconsin 54305

October 17, 1984

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

Gentlemen:

Docket 50-305
Operating License DPR-43
Kewaunee Nuclear Power Plant
Reportable Occurrence 84-009-01

In accordance with the requirements of 10 CFR 50.73 "Licensee Event Report System", the attached Licensee Event Report for reportable occurrence 84-009-01 is being submitted. A subsequent review of the original Licensee Event Report (LER 84-009-00) revealed several areas which required further clarification in the text. No changes to the abstract were necessary.

Very truly yours,

Carlton Hinder for

D. C. Hintz
Manager - Nuclear Power

JGT/js

Attach.

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