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May 28, 2004

SVP-04-056

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

Quad Cities Nuclear Power Station, Unit 2
Facility Operating License No. DPR-30
NRC Docket No. 50-265

Subject: Licensee Event Report 265/04-003, "Unit Trip from Turbine Trip during Thrust Bearing Wear Detector Testing"

Enclosed is Licensee Event Report (LER) 265/04-003, "Unit Trip from Turbine Trip during Thrust Bearing Wear Detector Testing," for Quad Cities Nuclear Power Station, Unit 2.

This report is submitted in accordance with the requirements of the Code of Federal Regulations, Title 10, Part 50.73(a)(2)(iv)(A), which requires reporting of any event or condition that resulted in manual or automatic actuation of the reactor protection system.

Should you have any questions concerning this report, please contact Mr. W. J. Beck at (309) 227-2800.

Respectfully,

Timothy J. Tulon
Site Vice President
Quad Cities Nuclear Power Station

cc: Regional Administrator – NRC Region III
NRC Senior Resident Inspector – Quad Cities Nuclear Power Station

IE22

NRC FORM 366 (7-2001) U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB NO. 3150-0104 EXPIRES 7-31-2004

Estimated burden per response to comply with this mandatory information collection request: 50 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the Records Management Branch (T-6 E6), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to bjs1@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202 (3150-0104), Office of Management and Budget, Washington, DC 20503. If a means used to impose information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

LICENSEE EVENT REPORT (LER)

1. FACILITY NAME	2. DOCKET NUMBER	3. PAGE
Quad Cities Nuclear Power Station Unit 2	05000265	1 of 3

4. TITLE: Unit Trip from Turbine Trip during Thrust Bearing Wear Detector Testing

5. EVENT DATE			6. LER NUMBER			7. REPORT DATE			8. OTHER FACILITIES INVOLVED	
MO	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REV NO	MO	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
									N/A	N/A
03	30	04	04	- 003 -	00	05	28	04	FACILITY NAME: N/A	DOCKET NUMBER: N/A

9. OPERATING MODE	1
10. POWER LEVEL	072

11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check all that apply)

20.2201(b)	20.2203(a)(3)(ii)	50.73(a)(2)(ii)(B)	50.73(a)(2)(ix)(A)
20.2201(d)	20.2203(a)(4)	50.73(a)(2)(iii)	50.73(a)(2)(x)
20.2203(a)(1)	50.36(c)(1)(i)(A)	X 50.73(a)(2)(iv)(A)	73.71(a)(4)
20.2203(a)(2)(i)	50.36(c)(1)(ii)(A)	50.73(a)(2)(v)(A)	73.71(a)(5)
20.2203(a)(2)(ii)	50.36(c)(2)	50.73(a)(2)(v)(B)	OTHER Specify in Abstract below or in NRC Form 366A
20.2203(a)(2)(iii)	50.46(a)(3)(ii)	50.73(a)(2)(v)(C)	
20.2203(a)(2)(iv)	50.73(a)(2)(i)(A)	50.73(a)(2)(v)(D)	
20.2203(a)(2)(v)	50.73(a)(2)(i)(B)	50.73(a)(2)(vii)	
20.2203(a)(2)(vi)	50.73(a)(2)(i)(C)	50.73(a)(2)(viii)(A)	
20.2203(a)(3)(i)	50.73(a)(2)(ii)(A)	50.73(a)(2)(viii)(B)	

12. LICENSEE CONTACT FOR THIS LER

NAME	TELEPHONE NUMBER (Include Area Code)
Wally Beck, Regulatory Assurance Manager	(309) 227-2800

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

CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX

14. SUPPLEMENTAL REPORT EXPECTED		15. EXPECTED SUBMISSION DATE	MONTH	DAY	YEAR
YES (If yes, complete EXPECTED SUBMISSION DATE)	X NO				

16. ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines)

On March 30, 2004, at 0740 hours, during testing of the Thrust Bearing Wear Detector (TBWD), the main turbine tripped and a Reactor Protection System trip signal was received from the closure of the main turbine stop valves. All control rods fully inserted, and the unit was taken to shutdown.

The cause of this event was the inappropriate use of a surveillance procedure with a known single-point vulnerability, in lieu of a calibration procedure. This was caused by an implementation practice that did not require performance of all three TBWD calibration procedures following turbine maintenance.

The safety significance of this event was minimal. All plant systems operated as designed to shut the unit down.

Corrective actions include the revision of the operations turbine test of the TBWD to provide a positive means of inhibiting a turbine trip during TBWD testing, a review of the implementation of Instrument Maintenance procedures for other situations in which the procedures are used interactively with procedures from another department, and the revision of the work frequency codes that determine when the local adjustment procedures are performed such that the procedures are appropriately performed at the end of an outage.

PLANT AND SYSTEM IDENTIFICATION

General Electric - Boiling Water Reactor, 2957 Megawatts Thermal Rated Core Power

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

EVENT IDENTIFICATION

Unit Trip from Turbine Trip during Thrust Bearing Wear Detector Testing

A. CONDITION PRIOR TO EVENT

Unit: 2 Event Date: March 30, 2004 Event Time: 0740 hours
Reactor Mode: 1 Mode Name: Power Operation Power Level: 072%

Power Operation (1) - Mode switch in the RUN position with average reactor coolant temperature at any temperature.

B. DESCRIPTION OF EVENT

On March 30, 2004, at 0740 hours, during testing of the Thrust Bearing Wear Detector (TBWD) [DET], the main turbine [TA] tripped and a Reactor Protection System [JC] trip signal was received from the closure of the main turbine stop valves. All control rods fully inserted, and the unit was taken to shutdown.

C. CAUSE OF EVENT

The cause of this event was the inappropriate use of a surveillance procedure, with a known single-point vulnerability, in lieu of a calibration procedure.

There are three procedures that adjust the TBWD. These are the TBWD local initial adjustment, the TBWD local intermediate adjustment, and the TBWD local final adjustment. Over the years, it has become accepted practice that the initial adjustment is not necessary, since the intermediate adjustment checks the same parameters. However, the intermediate adjustment does not have direction to balance the TBWD, but to check that it is within certain criteria. Also, the intermediate adjustment is performed with the turbine on the turning gear, instead of at 25% power as recommended by the vendor manual.

Also, it has become practice to use the results of the normal weekly turbine test, which tests the TBWD, to determine whether the local final adjustment needs to be performed. This is to save the dose involved in making the local adjustment. However, the normal weekly operations test of the TBWD does not positively remove the turbine trip during the test, but relies on test logic to inhibit the trip. This had previously been identified as a potential source of a plant trip from a single failure. The local adjustment procedure provides steps for electrically bypassing the TBWD trip.

Between the initial setup of the TBWD and the time of the unit trip, the turbine rotor [TRB] had axially shifted, due to run-in, temperature changes, and dynamic loading, causing the TBWD to be significantly out of adjustment. As a result, the displacement of the TBWD housing (used to simulate movement of the TBWD in response to bearing wear) caused the TBWD to initiate a main turbine trip when the test button was pushed during the operations weekly turbine test. The switches designed to inhibit the turbine trip during this test were operable; however, due to the degree to which the TBWD was out of adjustment, the turbine trip occurred early in the test such that the inhibit switches had not actuated.

D. SAFETY ANALYSIS

The safety significance of this event was minimal. All plant systems operated as designed to shut the unit down. There were no safety system functional failures associated with this event.

E. CORRECTIVE ACTIONS

Completed Corrective Actions

The operations turbine test of the TBWD was revised to provide a positive means (lead lift) of inhibiting a turbine trip during TBWD testing.

All TBWD testing was suspended pending further review of the testing process.

Corrective Actions to be Completed

The implementation of Instrument Maintenance (IM) procedures will be reviewed for other situations in which the procedures are used interactively with procedures from another department to ensure the IM procedure is being properly implemented.

The work frequency codes that determine when the local adjustment procedures are performed will be revised such that the procedures are appropriately performed at the end of an outage.

Modifications will be installed to provide a positive means (e.g., a manual test circuit bypass switch) to prevent trips during TBWD testing.

F. PREVIOUS OCCURRENCES

No previous occurrences were identified at Quad Cities Nuclear Power Station involving a scram during performance of the TBWD surveillance.

G. COMPONENT FAILURE DATA

There were no component failures associated with this event.