

LICENSEE EVENT REPORT (LER)

Form Rev. 2.0

Facility Name (1) Quad Cities Unit	Docket Number (2) 0   5   0   0   0   2   6   5	Page (3) 1   of   0   4
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Title (4) An improperly Revised Procedure Resulted in Exceeding a Technical Specification (TS) Surveillance Interval, Requiring that Unit Two enter a 12 hour Limiting Condition for Operation (LCO) to Hot Shutdown, due to the High Pressure Coolant Injection (HPCI) and Reactor Core Isolation Cooling (RCIC) Systems being Declared Inoperable.

Event Date (5)			LER Number (6)			Report Date (7)			Other Facilities Involved (8)						
Month	Day	Year	Year	Sequential Number	Revision Number	Month	Day	Year	Docket Number(s)						
0	9	18	1998	006	00	1	0	1	5	1998	0	5	0	0	0

OPERATING MODE (9) 1  
 THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10CFR (Check one or more of the following) (11)

POWER LEVEL (10) 1   0   0	<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 checked="" 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
	<input type="checkbox"/>	20.405(a)(1)(iii)	<input type="checkbox"/>	50.73(a)(2)(i)	<input type="checkbox"/>	50.73(a)(2)(viii)(A)	<input type="checkbox"/>	Abstract below and
	<input type="checkbox"/>	20.405(a)(1)(iv)	<input type="checkbox"/>	50.73(a)(2)(ii)	<input type="checkbox"/>	50.73(a)(viii)(B)	<input type="checkbox"/>	in Text
<input type="checkbox"/>	20.405(a)(1)(v)	<input type="checkbox"/>	50.73(a)(2)(iii)	<input type="checkbox"/>	50.73(a)(2)(x)	<input type="checkbox"/>		

LICENSEE CONTACT FOR THIS LER (12)

Name Charles Peterson, Regulatory Affairs Manager, ext. 3609	TELEPHONE NUMBER AREA CODE 3   0   9   6   5   4   -   2   2   4   1
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COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX

SUPPLEMENTAL REPORT EXPECTED (14)

YES (If yes, complete EXPECTED SUBMISSION DATE)	NO	X	Expected Submission Date (15)	Month	Day	Year

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

**ABSTRACT:**

At 1455 on 09181998, with Unit 2 at 100% power, the Instrument Maintenance Department was performing QCIS 0200-06, a Reactor Vessel Low-Low Water Level calibration and functional surveillance. During the surveillance, the instrument technician identified the need for a procedure clarification. After a procedure field change (PFC) was performed and with the re-calibration of the switches in progress, the two-hour allowance to conduct this TS surveillance expired. As a result, Unit 2 entered a 12 hour LCO to hot shutdown, due to HPCI and RCIC having to be declared inoperable.

The root cause of this event was due to an inadequate previous procedure revision. The previous revision to procedure QCIS 0200-06, "Low-Low Reactor Water Level Calibration and Functional Test", changed switch number 4 monitoring methods. Switch number 3 and 4 test methods should have been revised.

Corrective actions include: (1) revising procedure QCIS 0200-06 to allow resistance readings for monitoring contact status and reference to the TS two-hour short duration and (2) tailgate with Maintenance, stressing the importance of the TS short duration time clock allowance.

The safety significance of this event was minimal. Although the HPCI and RCIC systems were declared inoperable; they and other Emergency Core Cooling Systems were fully capable and available to perform their design functions. The health and safety of the general public and Control Room personnel was not affected.

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**LICENSEE EVENT REPORT (LER) TEXT CONTINUATION**

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

**PLANT AND SYSTEM IDENTIFICATION:**

General Electric - Boiling Water Reactor - 2511 MWt rated core thermal power.

**EVENT IDENTIFICATION:** An Improperly Revised Procedure Resulted in Exceeding a Technical Specification (TS) Surveillance Interval, Requiring that Unit Two enter a 12 hour Limiting Condition for Operation (LCO) to Hot Shutdown, due to the High Pressure Coolant Injection (HPCI) and Reactor Core Isolation Cooling (RCIC) Systems being Declared Inoperable.

**A. CONDITIONS PRIOR TO EVENT:**

Unit:	Two	Event Date:	09181998	Event Time:	1455
Reactor Mode:	One	Mode Name:	Power Operation	Power Level:	100%

This report was initiated by Licensee Event Report 265/98-006

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

**B. DESCRIPTION OF EVENT:**

At 1455 on 09181998, with Unit 2 at 100% power, Instrument Maintenance Department (IMD) personnel were performing QCIS 0200-06, "Low-Low Reactor Water Level Calibration and Functional Test." A two hour allowance per TS 3.2.B-1, note "a", was entered to conduct a quarterly surveillance test on the 2-0263-72B level transmitter. The 2-0263-72B level transmitter provides Emergency Core Cooling System (ECCS) initiation on low-low reactor level (-59 inches) and HPCI and RCIC isolation trips on reactor high level (+48 inches).

During the "as found" portions of the surveillance, the instrument technician identified switch number (#) 4 of the 2-0263-72B instrument as being out of specification on the administrative tolerance limit, but within TS limits. For switch # 3, the surveillance directs the technician to lift lead # 3 and connect an ohmmeter across it for contact closure. Switch #3 was within tolerance. After the recalibration of switch # 4, the other three switches needed to be rechecked. This is necessary due to the interaction between the switches. At this step, the surveillance directed the instrument technician, without lifting a lead, to connect a Volt-Ohm Meter (VOM) across the same # 3 switch contact to measure 0-125 volts Direct Current (DC).

At this point, the technician could not get a change in the meter while actuating the switch. The meter needed to be ranged down into the "millivolt" range or the "ohms" range to read the contacts. Because of this, a Procedure Field Change (PFC) was generated to clarify the intent. The PFC took approximately 45 minutes for final in place approval, so the IMD technician could continue with the surveillance. At 1455, the two hour allowance per TS 3.2.B-1, note "a" expired; the surveillance was stopped and the HPCI system [BJ] was declared inoperable in accordance with TS Table 3.2.B-1, Action Statement 31b, for the high vessel level trip. The RCIC system [BN] was declared inoperable per TS Table 3.2.D-1, Action Statement 41. With the HPCI and RCIC systems declared inoperable, Unit 2 entered the twelve hours to hot shutdown LCO, in accordance with the requirements of TS Actions 3.5.A.3 and 3.5.D.

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At 1530, the 2-0263-72B low-low level trip was inserted within the one-hour requirement of TS Action statement 3.2.B-1, 30.(a). The trip was removed at 1612 to allow the surveillance completion, which caused the ECCS systems to be declared inoperable in accordance with TS Action statement 3.2.B-1, 30. (a).

**C. CAUSE OF THE EVENT:**

The root cause of this event was due to an inadequate previous procedure revision. The revision to QCIS 0200-06 only addressed switch #4. Both switch numbers 3 and 4 test methods should have been revised.

**D. SAFETY ANALYSIS:**

Prior to the event, the "as found" switch calibrations were all within TS limits. The low-low reactor level ECCS initiation logic is arranged in a 1-out-of-2-taken twice logic. When the 2-0263-72B switches were isolated for surveillance testing, the other three Low-Low level switches were operable. Had an event occurred, the remaining switches would have actuated, as designed.

The safety significance of this event was minimal. Although the HPCI and RCIC systems were declared inoperable, the HPCI, RCIC and other ECCS systems, e.g. the Low-Pressure Coolant Injection mode of the Residual Heat Removal (RHR) System, were fully capable of performing their design functions. Had an actual low-low reactor water level condition existed, the ECCS systems would have performed their injection design functions. The health and safety of the general public and Control Room personnel was not affected.

**E. CORRECTIVE ACTIONS:**

Corrective Actions Completed:

Instrument Maintenance implemented a temporary change to QCIS 0200-06 for the proper test method.

Corrective Actions to be Completed:

1. Prior to performing the next required surveillance (due 11151998), QCIS 0200-06 will be revised to allow setting the VOM for measuring proper resistance (ohms). (NTS # 26518098SCAQ00006.01, Maintenance)
2. Tailgate this event with the Maintenance Departments by 11111998, stressing the importance of the TS short duration time clock allowance. (NTS # 26518098SCAQ00006.02, Instrument Maintenance)

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**F. PREVIOUS OCCURRENCES:**

A search, conducted for other LERs over the last 2 years, where procedural or predefine inadequacies were identified as the primary causal factor, indicated the following:

LER 254/96-014, Electrical distribution weekly surveillance did not document voltage verification in accordance with Technical Specification 4.9.E due to an inadequate procedure.

LER 254/96-024, Control Room Heating Ventilation and Air Conditioning Isolation System was inadequately tested due to a cognitive personnel error, which resulted in credit being taken for a Technical Specification requirement by a procedure that did not contain steps to satisfy that Technical Specification requirement.

LER 254/97-018, Surveillance was not properly performed due to inadequate procedure development and review during implementation of upgraded Technical Specifications.

LER 254/97-023, A required Technical Specification (TS) surveillance was not performed prior to reactor mode change on four occasions due to inadequate procedures associated with implementation of the TS upgrade program.

LER 265/97-002 Revision 1, Unit 2 was shutdown, per the requirements of Technical Specifications 3.5.A and 3.6.F, because four Main Steam Relief Valve closure times did not meet Inservice Testing Program limits. The timing methodology had changed; however, the acceptance criteria had not been re-evaluated. In addition, the Unit 2 shutdown was required because of a loss of primary containment integrity due to misinterpretation of Technical Specifications resulting in an inadequate procedure.

LER 254/97-026 Revision 1, Technical Specification (TS) required instrument channel checks were not documented prior to entering the applicable Mode due to inadequate procedure development and review.

The review of these previous events identified that the procedural and predefine deficiencies were technical inaccuracies. The corrective actions associated with the previous TS procedural and predefine problems were generally unrelated to LER 265/98-006, as those corrective actions were directed toward identifying deficiencies associated with the Upgraded TS program (TSUP). The subject procedural inaccuracy is more closely related to the manner in which the procedure was incompletely revised, i.e. procedure specific versus programmatic.

**G. COMPONENT FAILURE DATA:**

No component failures were associated with this event.