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September 15, 2003

SVP-03-103

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 265/03-005, "Technical Specification Allowable Value Exceeded for Main Steam Flow Switches due to Inadequate Drift Allowance used in Setpoint Calculation"

Enclosed is Licensee Event Report (LER) 265/03-005, "Technical Specification Allowable Value Exceeded for Main Steam Flow Switches due to Inadequate Drift Allowance used in Setpoint Calculation," 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)(i)(B), which requires reporting of any operation or condition which was prohibited by the plant's Technical Specifications.

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

# LICENSEE EVENT REPORT (LER)

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



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

4. TITLE: Technical Specification Allowable Value Exceeded for Main Steam Flow Switches due to Inadequate Drift Allowance used in Setpoint Calculation

| 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 |
| 07 | 17 | 03 | 03 | - 005 - | 00 | 09 | 15 | 03 | FACILITY NAME: N/A | DOCKET NUMBER: N/A |

| 9. OPERATING MODE | 1 |
|---|---|
| 10. POWER LEVEL | 085 |

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) | 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) | X 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 |
|---|---|---|---|---|---|---|---|---|---|
| B | SB | FS | I204 | N | | | | | |

| 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 July 17, 2003, at 1059 hours, during performance of the Unit 2 Division II Main Steam Line High Flow Switch Calibration and Functional Test, two main steam flow instruments were determined to have as-found setpoints that exceeded the Technical Specification (TS) Allowable Value. The instruments were calibrated to be within the TS allowable range. A total of 16 switches, four per steam line, are installed on the Unit 2 Main Steam Lines. The switches feed into the Primary Containment Isolation System, with "one out of two twice" logic.

The root cause of this event was the use of inadequate drift allowance in the associated setpoint calculation.

The safety significance of this event was minimal. The instruments would have provided the trip signal within the analytical values assumed in the accident analysis.

Corrective actions include a drift analysis and replacement of the instruments with an improved model.

**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**

Technical Specification Allowable Value Exceeded for Main Steam Flow Switches due to Inadequate Drift Allowance used in Setpoint Calculation

**A. CONDITION PRIOR TO EVENT**

Unit: 2 Event Date: July 17, 2003 Event Time: 1059 hours
Reactor Mode: 1 Mode Name: Power Operation Power Level: 085%

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

**B. DESCRIPTION OF EVENT**

On July 17, 2003, at 1059 hours, during performance of the Unit 2 Division II Main Steam Line High Flow Switch Calibration and Functional Test, two main steam [SB] flow instruments [FS] were determined to have as-found setpoints that exceeded the Technical Specification (TS) Allowable Value. The instruments were calibrated to be within the TS allowable range. A total of 16 switches, four per steam line, are installed on the Unit 2 main steam lines. The switches feed into the Primary Containment Isolation System [JM], with "one out of two twice" logic.

**C. CAUSE OF EVENT**

The root cause of this event was the use of inadequate drift allowance in engineering setpoint calculations.

The main steam flow switches were installed in February 2002. Because the main steam flow switches were newly installed at the time the setpoint calculations were performed, there was no historical drift data available. Therefore, the Technical Specification allowable value was calculated using the applicable calibration uncertainty values provided by the manufacturer along with an assumed drift term in accordance with procedural guidance. Based on the historical data that is now available, the drift that has been experienced exceeds the values assumed.

**D. SAFETY ANALYSIS**

The safety significance of this event was minimal. Although the instruments were found to have setpoints outside the TS allowable values, the instruments would have provided the trip signal within the analytical values assumed in the accident analysis. Therefore, the safety function would have been met. This event is being

reported as operation prohibited by TS due to the fact that multiple instruments were found out of calibration during the same surveillance, providing sufficient evidence that the situation existed longer than allowed by TS.

**E. CORRECTIVE ACTIONS**

Immediate Actions

The main steam flow switches were recalibrated.

Corrective Actions to be Completed

A drift analysis will be performed for the Unit 1 and Unit 2 main steam flow switches and current calibration frequencies will be evaluated. Additional actions will be taken as appropriate based on this evaluation.

The Unit 1 and Unit 2 Barton main steam flow switches will be replaced with differential pressure transmitters.

**F. PREVIOUS OCCURRENCES**

No instances of multiple main steam flow switches being outside of the Technical Specification Allowable Value were identified in the last two years. However, there was one instance (not reportable) of a single main steam flow switch on Unit 1 where the as-found setpoint exceeded the Technical Specification Allowable Value.

**G. COMPONENT FAILURE DATA**

The main steam flow switches are Barton Model 288A Differential Pressure Indicating Switches, with a setting range of 0 to 400 paid.