



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

November 25, 2008

Mr. Charles G. Pardee
President and Chief Nuclear Officer
Exelon Nuclear
4300 Winfield Road
Warrenville, IL 60555

SUBJECT: QUAD CITIES NUCLEAR POWER STATION, UNIT 1 – RELIEF REQUEST
NO. RV-30G FROM MAIN STEAM ELECTROMATIC RELIEF VALVE 0203-3C
TEST INTERVAL (TAC NO. MD8996)

Dear Mr. Pardee:

By letter dated June 19, 2008 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML081720346), Exelon Generation Company, LLC (the licensee), submitted Relief Request (RR) No. RV-30G for Quad Cities Nuclear Power Station (QCNPS), Unit 1. The licensee requested authorization to use an alternative to an inservice testing provision in the American Society of Mechanical Engineers (ASME), Code for Operation and Maintenance of Nuclear Power Plants (OM Code) in accordance with Title 10 of the *Code of Federal Regulations*, (10 CFR) Part 50, Section 55a.

The licensee proposed an alternative to the requirement in ASME OM Code Mandatory Appendix I, Section I-1330(a) (1998 Edition through 2000 Addenda) requiring that Class 1 pressure relief valves be tested every 5 years. The alternative was proposed for QCNPS, Unit 1 main steam electromatic relief valve (ERV) 0203-3C. The alternative requests approval to extend the test interval for ERV 0203-3C until the 20th QCNPS, Unit 1 refueling outage (Q1R20), which is approximately 2 months beyond 5 years.

The Nuclear Regulatory Commission (NRC) staff has reviewed the licensee's analysis in support of its request for relief. The NRC staff has concluded that the proposed alternative provides an acceptable level of quality and safety.

C. Pardee

- 2 -

Therefore, pursuant to 10 CFR 50.55a(a)(3)(i), the alternative to extend the test interval for ERV 0203-3C until the 20th QCNPS, Unit 1 Q1R20, requested by RR RV-30E, is authorized for QCNPS, Unit 1 ERV 0203-3C, which is a test interval of approximately 5 years and 2 months.

Sincerely,

A handwritten signature in black ink, appearing to read "Russell Gibbs", written in a cursive style.

Russell Gibbs, Chief
Plant Licensing Branch III-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-254

Enclosure:
Safety Evaluation

cc w/encl: Distribution via ListServ



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

ALTERNATIVE TEST INTERVAL FOR ELECTROMATIC RELIEF VALVE 0203-3C

EXELON GENERATION COMPANY, LLC

QUAD CITIES NUCLEAR POWER STATION, UNIT 1

RELIEF REQUEST RV-30G

DOCKET NO. 50-254

1.0 INTRODUCTION

By letter to the Nuclear Regulatory Commission (NRC, the Commission) dated June 19, 2008 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML081720346), Exelon Generation Company, LLC (the licensee) submitted Relief Request (RR) RV-30G, for Quad Cities Nuclear Power Station (QCNPS), Unit 1. The licensee requested authorization to use an alternative to an inservice testing (IST) provision in the American Society of Mechanical Engineers (ASME), "Code for Operation and Maintenance of Nuclear Power Plants" (OM Code) in accordance with Title 10 of the *Code of Federal Regulations* (10 CFR), Part 50, Section 55a.

The licensee proposed an alternative to the requirement in the ASME OM Code (1998 Edition through 2000 Addenda), which is the current Code of Record for the QCNPS, Unit 1 IST program. The alternative was proposed for QCNPS, Unit 1 main steam electromatic relief valve (ERV) 0203-3C. The alternative requests approval to extend the test interval for ERV 0203-3C for approximately 2 months on a 1-time basis.

2.0 REGULATORY EVALUATION

Pursuant to 10 CFR 50.55a(f), "Inservice Testing Requirements," ASME Code Class 1, 2, and 3 components must meet the requirements of the ASME OM Code and applicable addenda, except where alternatives have been authorized pursuant to paragraphs (a)(3)(i) and (a)(3)(ii) of 10 CFR 50.55a. Section 50.55a(a)(3)(i) of 10 CFR allows the Commission to authorize alternatives to ASME OM Code requirements upon a finding that the proposed alternatives would provide an acceptable level of quality and safety.

In Attachment 9 to a letter dated January 15, 2004 (ADAMS Accession No. ML040220182), the licensee requested, in part, relief from Subsection ISTC 3510 and proposed an alternative to exercise test the relief valves, including ERV 0203-3C, at the frequency required by Section I-1330. The NRC staff authorized the proposed alternative by letter dated

Enclosure

October 19, 2004 (ADAMS Accession No. ML042600563), for the duration of the fourth 10-year IST interval for QCNPS, Unit 1, which ends on February 18, 2013.

In the current RR RV-30G, the licensee requested authorization of an alternative to the 5-year test requirement in Mandatory Appendix I, "Requirements for Inservice Testing of Nuclear Power Plant Pressure Relief Devices," Section I-1330, "Test Frequencies, Class I Pressure Relief Valves," Paragraph (a), "5-Year Test Interval," of the 1998 Edition through 2000 Addenda of the ASME OM Code. The alternative was requested for ERV 0203-3C. The NRC staff's findings with respect to authorizing alternatives to the ASME OM Code are given below.

3.0 TECHNICAL EVALUATION FOR QCNPS RR RV-30G

3.1 Request No. RV-30G

3.1.1 ASME OM Code Requirement

ASME OM Code, Section ISTC-2000, "Supplemental Definitions," 1998 Edition through 2000 Addenda, defines a power-operated relief valve as a valve that can perform a pressure-relieving function by either a signal from a pressure-sensing device or a control switch.

ASME OM Code, Section ISTC-3510, "Exercising Test Frequency," 1998 Edition through 2000 Addenda, states, "Power operated relief valves shall be exercise tested once per fuel cycle."

3.1.2 Proposed Alternative Testing

The NRC previously approved the alternative in RR RV-30E for QCNPS Unit 1, in a letter dated October 19, 2004 (ADAMS Accession No. ML042600563), for the current QCNPS, Unit 1 IST program that complies with the 1998 Edition through 2000 Addenda of the ASME OM Code. The approved alternative authorizes the licensee to exercise test ERV 0203-3C at the frequency required by Section I-1330 (once per 5 years) instead of once per fuel cycle.

The licensee states that the 5-year interval for ERV 0203-3C expires on March 17, 2009. The licensee is proposing to delay the exercise test for ERV 0203-3C up to approximately 2 months beyond March 17, 2009, on a 1-time basis. The licensee states that ERV 0203-3C will be replaced during the upcoming QCNPS, Unit 1 refueling outage scheduled for spring 2009.

3.1.3 Basis for the Alternative

The licensee installed ERV Serial Number BY-94637 in QCNPS, Unit 1 position 0203-3C, during the April 2005 refueling outage. The licensee states that this was a refurbished valve that was pre-installation tested in March 2004 and placed into controlled storage until installation in April 2005. The licensee has determined that exercise testing an ERV with steam as the test medium can contribute to undesirable seat leakage of the valve during subsequent plant operation, and therefore, the ERVs are exercise tested at a test facility instead of in situ. The licensee asserts that the requested delay is short (i.e. approximately 2 months) and delaying the exercise test approximately 2 months will not adversely affect the operability of the ERV.

3.1.4 NRC Staff's Evaluation of Proposed Alternative

QCNPS, Unit 1 TS Surveillance Requirement (SR) 3.0.2 permits a 25 percent extension of the ASME OM Code test frequencies specified in QCNPS, Unit 1 TS 5.5.6 to facilitate scheduling and in consideration of plant operating conditions that may not be suitable for conducting the test. The 25 percent extension is not intended to be used repeatedly or merely as an operational convenience to extend the interval beyond the test frequencies specified in TS 5.5.6. QCNPS, Unit 1 TS SR 3.0.2 and TS 5.5.6 provide provisions for extending ASME OM Code test frequencies that are up to 48 months in duration. For example, a 48 month ASME OM Code test frequency could be extended up to 12 months in accordance with the provisions in TS SR 3.0.2 and TS 5.5.6. The NRC staff finds that extending the exercise test frequency for ERV 0203-3C for up to 2 months is acceptable. This 2-month extension is significantly less than the TS allowed extensions for other ASME OM Code test frequencies that are 12 months to 48 months in duration. The 2-month extension for exercise testing ERV 0203-03 is acceptable on a 1-time basis, and therefore, cannot be used repeatedly or merely as an operational convenience to extend the interval beyond 60 months. Delaying the exercise test approximately 2 months beyond 5 years should not adversely affect the operational readiness of the ERV and, therefore, the alternative provides an acceptable level of quality and safety.

3.1.5 Conclusion

Based on the NRC staff's review and evaluation of the information provided by the licensee, the staff concludes that extending the ERV 0203-03 exercise test interval for 2 months beyond 5 years is an acceptable alternative. The alternative is authorized pursuant to 10 CFR 50.55a(a)(3)(i) for QCNPS, Unit 1 ERV 0203-03 through the spring 2009 refueling outage on the basis that the alternative provides an acceptable level of quality and safety.

Principal Contributor: S. Tingen, NRR

Date: November 25, 2008

C. Pardee

- 2 -

Therefore, pursuant to 10 CFR 50.55a(a)(3)(i), the alternative to extend the test interval for ERV 0203-3C until the 20th QCNPS, Unit 1 Q1R20, requested by RR RV-30E, is authorized for QCNPS, Unit 1 ERV 0203-3C, which is a test interval of approximately 5 years and 2 months.

Sincerely,

/RA/

Russell Gibbs, Chief
Plant Licensing Branch III-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-254

Enclosure:
Safety Evaluation

cc w/encl: Distribution via ListServ

DISTRIBUTION:

| | | |
|---------------------------|------------|----------------------------------|
| PUBLIC | LPL3-2 R/F | RidsOgcRp Resource |
| RidsNrrDorlLp3-2 Resource | | RidsRgn3MailCenter Resource |
| RidsNrrLAEWhitt Resource | | RidsNrrPMQuadCities Resource |
| RidsAcrsAcnw_MailCTR | | Resource RidsNrrDciCptb Resource |
| MCox, EDO Region III | | STingen, NRR |

ADAMS ACCESSION NUMBER: ML082820171 NRR-028 *Previous concurrence via ML082671105

| | | | | | |
|--------|-----------|--------------------|-------------|-------------|-----------|
| OFFICE | LPL3-2/PM | LPL3-2/LA | DCI/CPTB/BC | OGC | LPL3-2/BC |
| NAME | JWiebe | EWhitt (via email) | JMcHale* | Lloyd Subin | RGibbs |
| DATE | 11/18/08 | 11/18/08 | 9/23/08 | 11/19/08 | 11/25/08 |

OFFICIAL RECORD COPY