



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

January 7, 2010

Mr. Timothy S. Rausch
Senior Vice President and Chief Nuclear Officer
PPL Susquehanna, LLC
769 Salem Boulevard
Berwick, PA 18603-0467

SUBJECT: SUSQUEHANNA STEAM ELECTRIC STATION, UNIT 1 RE: RELIEF
REQUESTS RR-07 AND RR-08 FROM THE REQUIREMENTS OF THE OM
CODE RE: INSERVICE TESTING OF SAFETY RELIEF VALVES
(TAC NOS. ME2629 AND ME2888)

Dear Mr. Rausch:

By letters dated November 20, 2009, (Agencywide Documents Access and Management System (ADAMS) Accession No. ML093350530) and December 10, 2009, PPL Susquehanna, LLC (the licensee) submitted Relief Requests (RR)-07 and RR-08 respectively, to the U.S. Nuclear Regulatory Commission (NRC) for the use of alternatives to American Society of Mechanical Engineers, *Code for Operation and Maintenance of Nuclear Power Plants* (ASME OM Code) requirement for the Susquehanna Steam Electric Station, Unit 1 (SSES, Unit 1).

Specifically, the licensee requested to use the proposed alternatives for inservice testing (IST) of the safety relief valves (SRVs) on the following bases:

- 1) RR-07: pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR) 50.55a(a)(3)(ii), the licensee requested to use the proposed alternative for IST of the SRVs on the basis that, compliance with previously authorized alternative would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety, and
- 2) RR-08: pursuant to 10 CFR 50.55a(a)(3)(i), the licensee requested to use the proposed alternative for IST of the SRVs on the basis that the alternative provides an acceptable level of quality and safety.

The NRC staff has reviewed the subject requests. As set forth in the enclosed safety evaluation (SE), the NRC staff determines that the proposed alternatives described in RR-07 and RR-08, provide an acceptable level of quality and safety and provide reasonable assurance that the SRVs are operationally ready. Accordingly, the NRC staff concludes that the licensee has adequately addressed all of the regulatory requirements set forth in 10 CFR 50.55a(a)(3)(i) and is in compliance with the ASME OM Code's requirements.

Therefore, the NRC staff authorizes the alternatives in RR-07 and RR-08 on the basis that the alternative provides an acceptable level of quality and safety, SRVs are operationally ready. The NRC staff authorizes the alternative in RR-07 for SSES Unit 1 main steam SRVs PSV141F013A and PSV141F013C, is authorized for the period of November 2009 through March 2010. The NRC provided verbal authorization for Alternative RR-07 for SSES Unit 1 on November 20, 2009. Documentation of the verbal authorization can be found in ADAMS Accession No.

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ML093240496. The NRC staff authorizes the alternative in RR-08 for SSES Unit 1 main steam SRV PSV141F013F on a one-time basis from the date of this SE through March 2010.

All other ASME OM Code requirements for which relief was not specifically requested and approved, remain applicable.

Please contact me at (301) 415-2942, or the Project Manager, Bhalchandra K. Vaidya at (301) 415-3308, if you have any questions.

Sincerely,

A handwritten signature in black ink that reads "Nancy L. Salgado". The signature is written in a cursive, flowing style.

Nancy L. Salgado, Chief
Plant Licensing Branch I-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-387

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

RELIEF REQUEST NOS. RR-07 AND RR-08 REGARDING PROPOSED ALTERNATIVE FOR

INSERVICE TESTING OF SAFETY RELIEF VALVES:

PSV141F013A, PSV141F013C, AND PSV141F013F

PPL SUSQUEHANNA, LLC

ALLEGHENY ELECTRIC COOPERATIVE, INC.

SUSQUEHANNA STEAM ELECTRIC STATION, UNIT 1

DOCKET NO. 50-387

1.0 INTRODUCTION

By letter dated November 20, 2009, (Agencywide Documents Access and Management System (ADAMS) Accession No. ML093350530) PPL Susquehanna, LLC (the licensee), requested that the U.S. Nuclear Regulatory Commission (NRC) authorize the use of alternative in Relief Request (RR)-07 for the Susquehanna Steam Electric Station (SSES), Unit 1. By letter dated December 10, 2009, the licensee requested the use of Alternative RR-08 for SSES Unit 1. The licensee requested authorization to use an alternative test interval instead of the interval required by the American Society of Mechanical Engineers (ASME), *Code for Operation and Maintenance of Nuclear Power Plants* (OM Code). In RR-07, the licensee requested authorization to extend the test interval for SSES Unit 1 main steam safety relief valves (SRVs) PSV141F013A and PSV141F013C beyond 6 years on a one-time basis until the March 2010 refueling outage. In RR-08, the licensee requested authorization to extend the test interval for SSES Unit 1 main steam SRV PSV141F013F beyond 6 years on a one-time basis until the March 2010 refueling outage.

Specifically, the licensee requested to use the proposed alternatives for inservice testing (IST) of the safety relief valves (SRVs) on the following bases:

- 1) RR-07: pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR) 50.55a(a)(3)(ii), the licensee requested to use the proposed alternative for IST of the SRVs on the basis that, compliance with previously authorized alternative would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety, and

Enclosure

- 2) RR-08: pursuant to 10 CFR 50.55a(a)(3)(i), the licensee requested to use the proposed alternative for IST of the SRVs on the basis that the alternative provides an acceptable level of quality and safety.

2.0 REGULATORY EVALUATION

Title 10 of the *Code of Federal Regulations*, Part 50, Section 50.55a(f), "Inservice testing requirements," requires, in part, that ASME 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.

In proposing alternatives, a licensee must demonstrate that the proposed alternative provides an acceptable level of quality and safety or that compliance would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety. The NRC is authorized under 10 CFR 50.55a to approve alternatives to ASME OM Code requirements upon making necessary findings.

The NRC findings with respect to authorizing alternatives to the ASME OM Code are given below.

3.0 TECHNICAL EVALUATION

3.1 Alternatives RR-07 and RR-08

The applicable ASME OM Code edition and addenda for SSES is the 1998 Edition through the 2000 Addenda. ASME OM Code Mandatory Appendix I, Paragraph I-1330(a), "Test Frequencies, Class 1 Pressure Relief Valves," 1998 Edition through the 2000 Addenda, requires that Class 1 pressure relief valves be tested at least once every 5 years. ASME Code Interpretation 01-18, "ASME OM Code-1995 With OMa ASME Code-1996 Addenda, Appendix I," dated June 26, 2003, clarifies that the 5-year test interval starts when the valve is tested.

In a letter dated March 10, 2005 (ADAMS Accession No. ML050690239), the NRC authorized Alternative RR-02 for the SSES third 10-year IST program interval. Alternative RR-02 authorized extension of the test interval for Unit 1 main steam SRVs to 6 years or every three refueling outages. Refueling outages are every 24 months at SSES.

The licensee is requesting authorization in Alternative RR-07 to extend the test interval for SSES Unit 1 main steam SRVs PSV141F013A and PSV141F013C beyond 6 years on a one-time basis until the March 2010 refueling outage. The licensee is requesting authorization in Alternative RR-08 to extend the test interval for SSES Unit 1 main steam SRV PSV141F013F beyond 6 years on a one-time basis until the March 2010 refueling outage.

The 6-year test interval for SRVs PSV141F013A, PSV141F013C, and PSV141F013F will expire before the refueling outage scheduled for March 2010. The licensee's practice was to test an SRV and then place it in storage before installing the SRV in the unit. The licensee considered the start of the 6-year test interval to begin once the SRV was installed and storage time was not included in the 6-year interval.

The licensee's justification for extending the test interval for PSV141F013A, PSV141F013C, and PSV141F013F beyond 6 years is that SRV as-found set pressure test data demonstrate that the current maintenance practices have been effective, and that storage has had no significant impact on SRV test results.

3.2 NRC Evaluation of Proposed Alternative

ASME OM Code Mandatory Appendix I does not require that SRVs be disassembled and inspected prior to the start of the 5-year test interval. The ASME developed Code Case OMN-17, "Alternative Rules for Testing ASME Class 1 Pressure Relief/Safety Valves," and plans to publish OMN-17 in the upcoming edition/addenda of the ASME OM Code. Code Case OMN-17 allows extension of the test interval for SRVs from 5 years to 6 years plus a 6-month grace period. The code case imposes a special maintenance requirement to disassemble and inspect each SRV to verify that parts are free from defects resulting from time-related degradation or maintenance-induced wear prior to the start of the extended test interval. Similar to the special maintenance requirement in Code Case OMN-17, the licensee stated that main steam SRVs PSV141F013A, PSV141F013C, and PSV141F013F were disassembled to perform inspection and maintenance activities prior to the start of the current test interval. All adverse conditions were corrected and each SRV was reassembled and tested.

The NRC staff finds that extending the 6-year test interval for main steam SRVs PSV141F013A, PSV141F013C, and PSV141F013F for up to 6 months is acceptable on a one time-basis until the March 2010 refueling outage. This is consistent with the maintenance and test provisions in ASME Code Case OMN-17. Extending the test interval for up to approximately 6 months beyond 6 years until the March 2010 refueling outage should not adversely affect the operational readiness of the SRVs because the SRVs were disassembled and inspected prior to the extended test interval. This additional maintenance is beyond what is required by ASME OM Code Mandatory Appendix I when testing SRVs on a 5-year interval and justifies extension of the test interval for up to 6 years plus a 6 month grace period while providing an acceptable level of quality and safety.

4.0 CONCLUSION

As set forth above, the NRC staff determines that the alternative in RR-07 is acceptable for Unit 1 SSES main steam SRVs PSV141F013A and PSV141F013C, and that the alternative in RR-08 is acceptable for Unit 1 SSES main steam SRV PSV141F013F. Accordingly, the NRC staff concludes that the licensee has adequately addressed all the regulatory requirements set forth in 10 CFR 50.55a(a)(3)(i), and is in compliance with the ASME Code requirements. Therefore, the NRC staff authorizes the alternative in RR-07 for Unit 1 SSES main steam PSV141F013A and PSV141F013C on a one-time basis until the March 2010 refueling outage. The NRC staff authorizes the alternative in RR-08 for Unit 1 SSES main steam PSV141F013F on a one-time basis from the date of this safety evaluation through March 2010.

The NRC provided verbal authorization for Alternative RR-07 for SSES Unit No. 1 on November 20, 2009. Documentation of the verbal authorization can be found in ADAMS Accession No. ML093240496.

All other ASME Code or ASME OM Code requirements for which relief was not specifically requested and approved remain applicable.

Principal Contributor: S. Tingen

Date: January 7, 2010

T. S. Rausch

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ML093240496. The NRC staff authorizes the alternative in RR-08 for SSES Unit 1 main steam SRV PSV141F013F on a one-time basis from the date of this SE through March 2010.

All other ASME OM Code requirements for which relief was not specifically requested and approved, remain applicable.

Please contact me at (301) 415-2942, or the Project Manager, Bhalchandra K. Vaidya at (301) 415-3308, if you have any questions.

Sincerely,

/RA/

Nancy L. Salgado, Chief
Plant Licensing Branch I-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-387

Enclosure:
Safety Evaluation

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ADAMS Accession No.: ML093520152 (*) No substantial changes to SE Input Memorandum

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