



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

June 16, 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 NO. 2 - REQUEST FOR  
ALTERNATIVE NO. RR-07 MAIN STEAM SAFETY RELIEF VALVE TEST  
INTERVAL EXTENSION (TAC NO. ME3320)

Dear Mr. Rausch:

By letter dated February 8, 2010, PPL Susquehanna, LLC (PPL, the licensee), submitted Relief Request RR-07, requesting to use an alternative inservice test provision in the American Society of Mechanical Engineers, *Code for Operation and Maintenance of Nuclear Power Plants*, in accordance with Title 10 of the *Code of Federal Regulations*, Part 50, Section 55a (10 CFR 50.55a) for Susquehanna Steam Electric Station, Unit No. 2 (SSES2). Specifically, the licensee requested authorization to extend the test interval for SSES2 Main Steam safety relief valves (SRVs) PSV241F013A, PSV241F013E, PSV241F013J, PSV241F013M, and PSV241F013P beyond 6 years on a one-time basis until the SSES2 spring 2011 refueling outage.

The Nuclear Regulatory Commission (NRC) staff has reviewed PPL's regulatory and technical analysis in support of RR-07. Based on the information provided by PPL, the NRC staff has concluded that the proposed alternative is authorized pursuant to 10 CFR 50.55a(a)(3)(i) for SSES2 Main Steam SRVs PSV241F013A, PSV241F013E, PSV241F013J, PSV241F013M, and PSV241F013P beyond 6 years on a one-time basis until the SSES spring 2011 refueling outage.

The NRC staff's safety evaluation is enclosed. If you have any questions, please contact Rich Guzman at (301) 415-1030 or via email at [Richard.Guzman@nrc.gov](mailto:Richard.Guzman@nrc.gov).

Sincerely,

A handwritten signature in black ink that reads "Nancy L. Salgado".

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

Docket No. 50-388

Enclosure:  
As stated

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

RELATED TO RELIEF REQUEST RR-07

MAIN STEAM SAFETY RELIEF VALVE TEST INTERVAL EXTENSION

PPL SUSQUEHANNA, LLC

SUSQUEHANNA STEAM ELECTRIC STATION, UNIT NO. 2

DOCKET NO. 50-388

1.0 INTRODUCTION

By letter dated February 8, 2010 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML100501162), PPL Susquehanna, LLC (PPL, the licensee), submitted Relief Request RR-07, requesting to use an alternative inservice test provision in the American Society of Mechanical Engineers, *Code for Operation and Maintenance of Nuclear Power Plants*, in accordance with Title 10 of the *Code of Federal Regulations*, Part 50, Section 55a (10 CFR 50.55a) for Susquehanna Steam Electric Station, Unit No. 2 (SSES2). Specifically, the licensee requested authorization to extend the test interval for SSES2 Main Steam safety relief valves (SRVs) PSV241F013A, PSV241F013E, PSV241F013J, PSV241F013M, and PSV241F013P beyond 6 years on a one-time basis until the SSES2 spring 2011 refueling outage. Pursuant to 10 CFR 50.55a(a)(3)(i), the licensee stated that the proposed 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) or (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 Nuclear Regulatory Commission (NRC) is authorized under 10 CFR 50.50.55a to approve alternatives to ASME OM Code requirements, as appropriate.

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

Enclosure

### 3.0 TECHNICAL EVALUATION

#### 3.1 Alternative RR-07

The applicable ASME OM Code edition and addenda for SSES2 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 the SSES1 and SSES2 2 Main Steam SRVs to 6 years or every three refueling outages. Refueling outages are nominally every 24 months at SSES 1 and 2.

The licensee is requesting authorization in Alternative RR-07 to extend the test interval for SSES2 Main Steam SRVs PSV241F013A, PSV241F013E, PSV241F013J, PSV241F013M, and PSV241F013P beyond 6 years on a one-time basis until the spring 2011 refueling outage which is scheduled to start in April 2011. The Main Steam SRVs PSV241F013A, PSV241F013E, PSV241F013J, PSV241F013M, and PSV241F013P will expire before the refueling outage scheduled for spring 2011. 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 Main Steam SRVs PSV241F013A, PSV241F013E, PSV241F013J, PSV241F013M, and PSV241F013P beyond 6 years is that SRV as-found set pressure test data demonstrate that current maintenance practices have been effective, and that storage has had no significant impact on SRV test results.

#### 3.2 NRC Staff's 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," which was published in the 2009 Edition of 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 PSV241F013A, PSV241F013E, PSV241F013J, PSV241F013M, and PSV241F013P 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. These five valves were last tested in August of 2004. Per the previously authorized alternative in RR-02 and in view of ASME

Code Interpretation 01-18, these valves would, therefore, be required to be re-tested or replaced by August of 2010.

The NRC staff finds that extending the 6-year test interval for Main Steam SRVs PSV241F013A, PSV241F013E, PSV241F013J, PSV241F013M, and PSV241F013P until the spring 2011 refueling outage (April 2011) is acceptable. Extending the test interval by 7 months, while slightly longer than the 6-month extension endorsed by ASME Code Case OMN-17, is nonetheless consistent with the code case approach since disassembly, inspection, and maintenance were performed for these valves (in addition to the normally required set-pressure testing). This additional inspection and 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 an additional grace period of approximately 7 months while providing an acceptable level of quality and safety.

#### 4.0 CONCLUSION

As set forth above, the NRC staff determines that the alternative in Request RR-07 is acceptable for SSES2 Main Steam SRVs PSV241F013A, PSV241F013E, PSV241F013J, PSV241F013M, and PSV241F013P. 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). Therefore, the NRC staff authorizes the alternative in Request RR-07 for SSES2 Main Steam SRVs PSV241F013A, PSV241F013E, PSV241F013J, PSV241F013M, and PSV241F013P on a one-time basis until the April 2011 refueling outage.

Principal Contributor: John Billerbeck

Date: June 16, 2010

June 16, 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 NO. 2 - REQUEST FOR ALTERNATIVE NO. MSS-VR-02 MAIN STEAM SAFETY RELIEF VALVE TEST INTERVAL EXTENSION (TAC NO. ME2130)

Dear Mr. Rausch:

By letter dated February 8, 2010, PPL Susquehanna, LLC (PPL, the licensee), submitted Relief Request RR-07, requesting to use an alternative inservice test provision in the American Society of Mechanical Engineers, *Code for Operation and Maintenance of Nuclear Power Plants*, in accordance with Title 10 of the *Code of Federal Regulations*, Part 50, Section 55a (10 CFR 50.55a) for Susquehanna Steam Electric Station, Unit No. 2 (SSES2). Specifically, the licensee requested authorization to extend the test interval for SSES2 Main Steam safety relief valves (SRVs) PSV241F013A, PSV241F013E, PSV241F013J, PSV241F013M, and PSV241F013P beyond 6 years on a one-time basis until the SSES2 spring 2011 refueling outage.

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Sincerely,

/RA/

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

Docket No. 50-388

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