Southern Nuclear

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U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D. C. 20555-0001

Edwin I. Hatch Nuclear Plant Units 1 and 2
Proposed Alternative RR-V-12 Regarding Main Steam Safety Relief Valve Testing

Ladies and Gentlemen:

In accordance with 10 CFR 50.55a(z)(2), Southern Nuclear Operating Company (SNC) hereby submits Alternative RR-V-12. This Alternative will extend the frequency for testing all main steam safety relief valves for the Edwin I. Hatch Nuclear Plant (HNP) Units 1 and 2 from once every five years to once every three refueling cycles (i.e. six years) as allowed by Code Case OMN-17.

This letter contains no NRC commitments. If you have any questions, please contact Ken McElroy at 205.992.7369.

Respectfully submitted,

C. A. Gayheart
Regulatory Affairs Director

CAG/RMJ

Enclosure: Alternative RR-V-12

Cc: Regional Administrator, Region II
NRR Project Manager – Hatch
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Edwin I. Hatch Nuclear Plant Units 1 and 2
Proposed Alternative RR-V-12 Regarding Main Steam Safety Relief Valve Testing

Enclosure

Alternative RR-V-12

1. References ASME Code Component(s) Affected

Code Class:	ASME Section XI Code Class 1
Component Numbers:	Various (see Table 1 for detailed list of components)
Code References:	ASME OM Code, 2004 Edition thru 2006 Addenda

2. Requested Approval Date

Approval is requested by 1/25/2019.

3. Applicable ASME Code Requirements

ASME OM Code, 2004 Edition through the 2006 Addenda, Division 1, Mandatory Appendix I, Inservice Testing of Pressure Relief Devices in Light-Water Reactor Nuclear Power Plants, Section I-1320 requires that all Class 1 pressure relief valves shall be tested at least once every 5 years. Additionally, a minimum of 20% of the valves from each valve group shall be tested within any 24-month period.

The Target Rock Model 0867F 3-Stage Main Steam Safety Relief Valves (SRVs) subject to this request are listed below in Table 1. This table applies to Hatch Nuclear Plant (HNP) Units 1 and 2.

4. Components Affected

Table 1

Unit 1 Valves	Unit 2 Valves	Description	ASME Class
1B21-F013A	2B21-F013A	Main Steam SRV	1
1B21-F013B	2B21-F013B	Main Steam SRV	1
1B21-F013C	2B21-F013C	Main Steam SRV	1
1B21-F013D	2B21-F013D	Main Steam SRV	1
1B21-F013E	2B21-F013E	Main Steam SRV	1
1B21-F013F	2B21-F013F	Main Steam SRV	1
1B21-F013G	2B21-F013G	Main Steam SRV	1
1B21-F013H	2B21-F013H	Main Steam SRV	1
1B21-F013J	2B21-F013K	Main Steam SRV	1
1B21-F013K	2B21-F013L	Main Steam SRV	1
1B21-F013L	2B21-F013M	Main Steam SRV	1

5. Reason for Request

Section ISTC-5240, "Safety and Relief Valve," directs that safety and relief valves meet the inservice testing requirements set forth in Appendix I of the ASME OM Code. Appendix I, Section I-1320(a) of the ASME OM Code states that Class 1 pressure relief valves shall be tested at least once every 5 years, starting with initial power generation. This section also states a minimum of 20% of the pressure relief valves shall be tested within any 24-month period, and that the test interval for any individual valve shall not exceed 5 years. The

required tests ensure that the SRV main bodies will open at the pressures assumed in the safety analysis. Due to the current 24-month operating cycle for each HNP unit, SNC is required to remove and test approximately half of the 11 SRV main bodies every refueling outage to ensure that SRV main bodies are tested in accordance with the ASME OM Code requirements. This ensure compliance with the ASME OM Code for testing all Class pressure relief valve within a 5-year interval. With the current 5-year interval, Hatch is required to remove and test all 11 SRV main bodies over two refueling cycles (i.e. 4 years). Approval to extended the test interval to 6 years with a 6-month allowable grace period would reduce the number of SRV main bodies removed during an individual refueling outage such that the full scope of 11 SRV main bodies are tested over 3 refueling cycles (i.e. 6 years). Without Code relief, the incremental outage work due to the inclusion of the additional two SRV main bodies per outage would be contrary to the principal of maintaining radiation dose As Low As Reasonably Achievable (ALARA). The removal and replacement of the additional SRV main bodies per outage results in an additional personnel radiation exposure of approximately 2.4 Rem every 6 years per unit.

6. Proposed Alternative and Basis for Use

Proposed Alternative and Basis

As an alternate to the Code required 5-year test interval per Appendix I, I-1320(a), SNC proposes that all subject SRV main bodies be tested at least once every 3 refueling cycles (i.e. 6 years) as allowed by OM Code Case OMN-17. A minimum of 20% of the SRV main bodies will continue to be tested within any 24-month period. The test interval of any individual SRV main body would not exceed 6 years, except that a 6-month grace period is allowed to coincide with refueling outages to accommodate extended shutdown periods and certification of the valve prior to installation. The SRV main bodies shall be disassembled and inspected to verify that parts are free of defects or service induced wear. Each SRV main body shall be disassembled and inspected prior to the start of the 6-year interval. The relief valve test and maintenance cycle at HNP consist of removal of the SRV main body complement requiring testing and transportation to an off-site facility. An as-found test is performed upon receipt at the off-site facility. Prior to return, the valves are disassembled and inspected to verify that internal surfaces and parts are free from defects or service induced wear prior to the start of the next interval. Damaged or worn parts, springs, gaskets and seals are replaced as necessary. The existing process is in accordance with ASME OM Code Case OMN-17. The 0867F 3-stage SRVs were initially installed during the Spring 2014 Unit 1 refueling outage and the Spring 2011 Unit 2 refueling outage. These SRV main bodies have experienced no failure since installation.

Conclusions

Pursuant to 10 CFR 50.55a, "Codes and Standards," paragraph (z)(2), relief is requested from the frequency specifications of the ASME OM Code. The basis for this relief request is the Code requirement presents an undue hardship without a compensating increase in the level of quality or safety.

7. Duration of Proposed Alternative

This proposed alternative is an extension of the OM Code requirement to test all SRV main bodies every 5 years to every 6 years. The proposed alternative will be utilized during the remainder of the HNP Fifth 10-Year IST Interval.

8. Precedent

In Reference 2, the NRC reviewed and approved relief requests for both Dresden Nuclear Power Station (DNPS), Units 2 and 3, and Quad Cities Nuclear Power Station (QCNPS), Units 1 and 2 to extend their main steam safety valve (MSSV) test interval duration to 6.5 years for the remainder of the fourth 10-year Inservice Testing interval.

In Reference 3, the NRC reviewed and approved a relief request for Susquehanna Steam Electric Station (SSES), Units 1 and 2 to extend the MSSV test interval duration to six years for the entire third 10-year inservice Testing interval.

In Reference 4, the NRC reviewed and approved a relief request for Nine Mile Point Nuclear Power Station, Unit 2 (NMP2) to extend the MSSV test interval duration to three refueling outages or approximately six years for the entire third 10-year Inservice Testing interval.

In Reference 5, the NRC reviewed and approved a relief request for Clinton Power Station to extend the SRV test interval duration to three refueling outages or approximately 6.5 years for the remainder of the second 10-year Inservice Testing interval.

9. References

1. Code Case OMN-17, Alternative Rules for Testing ASME Class 1 Pressure Relief/Safety Valves, as published in the 2012 Edition of the ASME OM Code.

2. Letter from U. S. NRC to Mr. Charles G. Pardee (Exelon Generation Company, UC), "Dresden Nuclear Power Station Units 2 and 3 – Relief Request No. RV-02C from 5-year Test Interval for Main Steam Safety Valves (TAC Nos. MD8150 and MD8151) and Quad Cities Nuclear Power Station, Units 1 and 2 - Relief Requests No. RV-30E and RV-30F from 5-year test interval for Main Steam Safety Valves {TAC Nos. MD6682, MD6683, MD8241, and MD8242}," dated June 27, 2008 (ML081330557).

3. Letter from U. S. NRC to Mr. B. L. Shriver (PPL Susquehanna, LLC}, "Susquehanna Steam Electric Station Units 1 and 2 Third ,10-year Interval Inservice Testing (IST) Program Plans (TAC Nos. MC3382, MC3383, MC3384, MC3385, MC3386, MC3387, MC3388, MC3389, MC4421, MC4422)," dated March 10, 2005 (ML050690239).

4. Letter from U. S. NRC to Mr. J. H. Mueller (Niagara Mohawk Power Corporation), "Nine Mile Point Nuclear Power Station, Unit No. 2 - Alternative to American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code) Regarding Inservice Testing of Main Steam Safety/Relief Valves (TAC No. MB0290)," dated April 17, 2001 (ML010880286).

5. Letter from U.S. NRC to Mr. Charles G. Pardee (Exelon Generating Company LLC) "Clinton Power Station Unit No. 1" - Request for relief from ASME OM Code 5-Year Test Interval for Safety Relief Valves (TAC NO. ME0044) dated August 26, 2009 (ML092250442).