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February 27, 2017

U. S. Nuclear Regulatory Commission
Document Control Desk
Washington, DC 20555

RBG- 47737

Subject: Relief Requests for 10-year updates to the 120-Month Inservice Testing Intervals

River Bend Station – Unit 1
Docket No. 50-458
License No. NPF-47

Pursuant to 10 CFR 50.55a, River Bend Station - Entergy Operations, Inc. (Entergy) requests alternatives for the Inservice Testing Program. These requests are needed to support the 120-month updates for the upcoming intervals. These requests are similar to requests approved for use in the current interval. The details of the 10 CFR 50.55a requests are provided in the attachment.

Entergy requests approval as soon as practical. The new intervals start on 12-2-2017.

If you have any questions or require additional information, please contact Tim Schenk at (225) 381- 4177.

This letter contains no new commitments.

Sincerely,

A handwritten signature in black ink, appearing to read "Tim Schenk".

Timothy A. Schenk
Manager - Licensing

RB1-17-0020

A047
NRR

Attachments:

Attachment 1: RBS, River Bend Station 10 CFR 50.55a Relief Request Number PRR-RBS-2017-1 Proposed Alternative In Accordance with 10 CFR 50.55a(z)(2) Hardship Without a Compensating Increase in Quality and Safety

Attachment 2: RBS, River Bend Station 10 CFR 50.55a Relief Request Number PRR-RBS-2017-2 Proposed Alternative In Accordance with 10 CFR 50.55a(z)(1) Acceptable Level of Quality and Safety

Attachment 3: RBS, River Bend Station 10 CFR 50.55a Relief Request Number VRR-RBS-2017-1 Proposed Alternative In Accordance with 10 CFR 50.55a(z)(1) Acceptable Level of Quality and Safety

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Attachment 1

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RBS, River Bend Station
10 CFR 50.55a Relief Request Number PRR-RBS-2017-1
Proposed Alternative In Accordance with 10 CFR 50.55a(z)(2)
Hardship Without a Compensating Increase in Quality and Safety

RBS, River Bend Station
10 CFR 50.55a Relief Request Number PRR-RBS-2017-1
Proposed Alternative In Accordance with 10 CFR 50.55a(z)(2)
Hardship Without a Compensating Increase in Quality and Safety

1. American Society of Mechanical Engineers (ASME) Code Component(s) Affected

<u>Pump ID</u>	<u>Function</u>	<u>Category</u>	<u>Class</u>
SWP-P2A	STANDBY SERVICE WATER PUMP A	Group B	3
SWP-P2B	STANDBY SERVICE WATER PUMP B	Group B	3
SWP-P2C	STANDBY SERVICE WATER PUMP C	Group B	3
SWP-P2D	STANDBY SERVICE WATER PUMP D	Group B	3

2. Applicable ASME Code Edition and Addenda

ASME OM Code-2004 Edition, with Addenda through and including ASME Omb Code-2006.

3. Applicable Code Requirement(s)

ASME OM Code 2004 Edition with addenda through Omb Code 2006 Addenda ISTB-3540(b) requires that vibration measurements on vertical line shaft pumps be taken on the upper motor-bearing housing in three orthogonal directions, one of which is in the axial direction.

4. Reason for Request

Pursuant to 10 CFR 50.55a, "Codes and Standards", paragraph (z)(2), an alternative is requested when using the requirements of ASME OM Code-2004 Edition with addenda through Omb Code-2006 Addenda ISTB (as listed above).

This alternative is a re-submittal of NRC approved 2nd Interval PRR-006 that was based on the ASME OM Code 1987 Edition with addenda through OMa-1988. The 3rd Interval alternative request PRR-RBS-2007-1 was based on the ASME OM Code-2001 Edition with addenda through Omb Code-2003 Addenda. This re-submittal is an alternative based on the ASME OM Code-2004 Edition with addenda through Omb Code-2006 Addenda. There have been no substantive changes to this alternative, to the OM Code requirements or to the basis for use, which would alter the previous NRC Safety Evaluation conclusions.

The Code-required vibration measurements on the upper motor bearing housing on these vertical line shaft pumps are impractical because the standby service water pump motors are totally enclosed, weather-proof induction motors that are equipped with housing covers which completely enshroud the upper motor bearing housing. The housing cover precludes vibration measurements from being taken directly on the upper bearing housing.

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5. Proposed Alternative and Basis for Use

Vibration measurements will be taken in three orthogonal directions in a location that provides valid indication of motor vibratory motion in close proximity of the upper motor bearing housing.

On the standby service water pumps the upper bearing measurements will be taken at the lifting lug that is integral to the motor stator housing. The lifting lug is structurally rigid and provides transmissibility of the motor vibratory motion. The vibration measurements will be taken in three orthogonal directions on the lifting lug. This location has demonstrated the ability to provide repeatable vibration data and will provide readings that are at least as representative of pump mechanical condition as those required by the ASME OM Code-2004 Edition with addenda through OMB Code-2006 Addenda. Therefore, application of the ASME OM Code-2004 Edition with addenda through OMB Code-2006 Addenda hydraulic testing criteria along with radial and axial vibration monitoring on the lifting lug should provide adequate data for assessing the condition of the subject pumps and for monitoring for degradation.

The above proposed alternative provides reasonable assurance of the operational readiness since vibration measurements will be taken in three orthogonal directions on the lifting lug. These readings will provide information as to the mechanical integrity of the pumps.

Based on the determination that compliance with the ASME OM Code-2004 Edition with addenda through OMB Code-2006 Addenda requirements results in a hardship without a compensating increase in the level of quality or safety, this proposed alternative should be granted pursuant to 10 CFR 50.55a(z)(2).

6. Duration of proposed Alternative

This relief is requested for the fourth ten year IST interval, which begins December 2, 2017 and is scheduled to end on December 1, 2027.

7. Precedent

Use of an alternative for similar requirements was previously granted as PRR-006 for River Bend's 2nd 120-month Inservice Testing Interval (TAC-No. M97705).

Use of an alternative was also granted as PRR-RBS-2007-1 for River Bend's 3rd 120-month Inservice Testing Interval (RBC-50599)

Attachment 2

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RBS, River Bend Station
10 CFR 50.55a Relief Request Number PRR-RBS-2017-2
Proposed Alternative In Accordance with 10 CFR 50.55a(z)(1)
Acceptable Level of Quality and Safety

RBS, River Bend Station
10 CFR 50.55a Relief Request Number PRR-RBS-2017-2
Proposed Alternative In Accordance with 10 CFR 50.55a(z)(1)
Acceptable Level of Quality and Safety

1. American Society of Mechanical Engineers (ASME) Code Component(s) Affected

Pump ID	Function	Category	Class
E12-PC002A	RESIDUAL HEAT REMOVAL PUMP 2A	Group A	2
E12-PC002B	RESIDUAL HEAT REMOVAL PUMP 2B	Group A	2
E12-PC002C	RESIDUAL HEAT REMOVAL PUMP 2C	Group B	2
SFC-P1A	FUEL POOL COOLING PUMP A	Group A	3
SFC-P1B	FUEL POOL COOLING PUMP B	Group A	3
HVK-P1A	CONTROL BLDG CHILLED WATER PUMP 1A	Group A	3
HVK-P1B	CONTROL BLDG CHILLED WATER PUMP 1B	Group A	3
HVK-P1C	CONTROL BLDG CHILLED WATER PUMP 1C	Group A	3
HVK-P1D	CONTROL BLDG CHILLED WATER PUMP 1D	Group A	3
SWP-P3A	CNTRL BLDG CHILLED WATER RECIRC PUMP A	Group A	3
SWP-P3B	CNTRL BLDG CHILLED WATER RECIRC PUMP B	Group A	3
SWP-P3C	CNTRL BLDG CHILLED WATER RECIRC PUMP C	Group A	3
SWP-P3D	CNTRL BLDG CHILLED WATER RECIRC PUMP D	Group A	3
E12-PC003	RESIDUAL HEAT REMOVAL PUMP DISCHARGE LINE FILL PUMP	Group A	2
E21-PC002	LOW PRESSURE CORE SPRAY PUMP DISCHARGE LINE FILL PUMP	Group A	2
E22-PC003	HPCS PUMP DISCHARGE LINE FILL PUMP	Group A	2
E51-PC003	REACTOR CORE ISOL COOLING SUB SYSTEM FILL PUMP	Group A	2
E51-PC001	REACTOR CORE ISOL COOLING PUMP	Group B	2
E21-PC001	LOW PRESSURE CORE SPRAY PUMP	Group B	2
E22-PC001	HIGH PRESSURE CORE SPRAY PUMP	Group B	2

2. Applicable ASME Code Edition and Addenda

ASME OM Code-2004 Edition, with Addenda through and including ASME Omb Code-2006.

3. Applicable Code Requirement(s)

- Table ISTB-3000-1, "Inservice Test Parameters"
- Table ISTB-3400-1, "Inservice Test Frequency"
- Table ISTB-3510-1, "Require Instrument Accuracy"
- Table ISTB-5121-1, "Centrifugal Pump Test Acceptance Criteria"

ISTB-5123, "Comprehensive Test Procedure". Comprehensive tests shall be conducted with the pump operating at a specified reference point. The test parameters shown in Table ISTB-3000-1 shall be determined and recorded as required by this paragraph.

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Acceptable Level of Quality and Safety

4. Reason for Request

Pursuant to 10 CFR 50.55a, "Codes and Standards", paragraph (z)(1), an alternative is requested when using the requirements of ASME OM Code-2004 Edition with addenda through OMB Code-2006 Addenda ISTB (as listed above).

The ASME OM Code Committee has approved Code Case OMN-18, "Alternative Testing Requirements for Pumps Tested Quarterly with +/- 20% of Design Flow," which allows owners to perform a Group A test in lieu of the Comprehensive Pump Test (CPT) if the Group A test is conducted at +/- 20% of the design flow rate and uses pressure instruments that meet the CPT accuracy requirements (+/- 1/2%). This Code Case was not reviewed for approval in Regulatory Guide 1.192, "Operation and Maintenance Code Case Acceptability, ASME OM Code", Revision 1, August 2014. However, the OM Code Case OMN-18 is listed in Draft Regulatory Guide DG-1297 (Proposed Revision 2 to Regulatory Guide 1.192, dated March 2016), "Operation and Maintenance Code Case Applicability, ASME OM Code". River Bend Station is scheduled to enter their 4th 10 Year Interval on December 2, 2017, at which time Revision 2 of Regulatory Guide 1.192 will be approved through Rulemaking (scheduled for March 1, 2017) and River Bend Station will apply the condition for use of OMN-18 as currently listed in DG-1297.

The basis for this change is that a quarterly Group A pump test, performed at the CPT flow rate provides more consistent data for trending than a Group A test in conjunction with a biennial CPT. The increased requirements imposed by the proposed alternative on the parameters to be monitored during every quarterly pump test and the more accurate instruments allow River Bend Station to perform better trending of pump performance data due to the more consistent requirements for each of the quarterly tests. Also, combined with more trending information since the pump is tested quarterly, the overall performance is monitored more consistently.

5. Proposed Alternative and Basis for Use

River Bend Station proposes that in lieu of the CPT requirements of Table ISTB-3400-1, Group A tests will be performed quarterly within +/- 20 percent of the pump design flow rate, with pressure measuring instrumentation meeting the (+/- 1/2%) instrument accuracy requirements of Table ISTB-3510-1 specified for the biennial Comprehensive Test. In addition, River Bend Station has elected to restrict the upper limit for differential pressure to 6%, in accordance with the proposed Condition imposed within proposed Revision 2 of Regulatory Guide 1.192. The upper end values of the Group A Test Acceptance Ranges for flow and differential pressure (or discharge pressure) will be 1.06Qr and 1.06ΔPr, respectively, as applicable to the pump type. The high values of the Required Action Ranges for flow and differential pressure (or discharge pressure) will be >1.06Qr and 1.06ΔPr, respectively, as applicable to the pump type. This condition

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would continue once Revision 2 of Regulatory Guide 1.192 is issued in 2017. River Bend Station will use OMN-18, as published in the 2012 Edition, which is also based on the listing within proposed Revision 2 of Regulatory Guide 1.192, "Operation and Maintenance Code Case Acceptability, ASME OM Code".

Vibration testing will continue to be performed under the proposed modified Group A test and the acceptance criteria for vibration will be the same as required for the Group A tests as shown in Table ISTB-5100-1.

Using the provisions of this relief request as an alternative to those specified in ISTB-5123 will provide adequate indication of pump performance, permit consistent detection of component degradation, and continue to provide an acceptable level of quality and safety.

Therefore, pursuant to 10 CFR 50.55a(z)(1), River Bend Station requests relief from the specific ISTB requirements identified in this request.

6. Duration of proposed Alternative

This relief is requested for the fourth ten year IST interval, which begins December 2, 2017 and is scheduled to end on December 1, 2027.

7. Precedent

Use of an alternative was granted to Perry Nuclear Power Plant, Unit 1, Relief Request PR-3 for the 3rd 10-Year Interval Pump and Valve Inservice Testing Program (TAC No. ME0820) (ML092640690)

Use of an alternative was granted to St. Lucie Unit Nos. 1 and 2, Relief From the Requirements of the ASME Code, Relief Request No. 9 (TAC No. ME5190 and ME5191) (ML11143A077)

Use of an alternative was granted to South Texas Project, Units 1 and 2, Relief Requests No. VRR-01, PRR-01, PRR-02 and PRR-03 for the Third 10-Year Inservice Testing Program Interval (TAC No. ME3515, ME3516, ME3517, ME3518, ME3519, ME3520, ME3521, and ME3522) (ML10215077)

Use of an alternative was granted to PSEG Salem Nuclear Generating Station (Salem), Unit Nos. 1 and 2, (TAC NOS. ME7938 and ME7939) (ML 12185A162) July 11, 2012

Attachment 3

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Acceptable Level of Quality and Safety

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1. American Society of Mechanical Engineers (ASME) Code Component(s) Affected

Valve ID	Function	Category	Class
B21-RVF041A	MAIN STEAM LINE A PRESSURE RELIEF VALVE	B/C	1
B21-RVF041B	MAIN STEAM LINE B AUTO DEPRESSURIZATION SYSTEM PRESSURE RELIEF VALVE	B/C	1
B21-RVF041C	MAIN STEAM LINE C AUTO DEPRESSURIZATION SYSTEM PRESSURE RELIEF VALVE	B/C	1
B21-RVF041D	MAIN STEAM LINE D AUTO DEPRESSURIZATION SYSTEM PRESSURE RELIEF VALVE	B/C	1
B21-RVF041F	MAIN STEAM LINE B AUTO DEPRESSURIZATION SYSTEM PRESSURE RELIEF VALVE	B/C	1
B21-RVF041G	MAIN STEAM LINE C PRESSURE RELIEF VALVE	B/C	1
B21-RVF041L	MAIN STEAM LINE C PRESSURE RELIEF VALVE	B/C	1
B21-RVF047A	MAIN STEAM LINE A AUTO DEPRESSURIZATION SYSTEM PRESSURE RELIEF VALVE	B/C	1
B21-RVF047B	MAIN STEAM LINE B PRESSURE RELIEF VALVE	B/C	1
B21-RVF047C	MAIN STEAM LINE C AUTO DEPRESSURIZATION SYSTEM PRESSURE RELIEF VALVE	B/C	1
B21-RVF047D	MAIN STEAM LINE D PRESSURE RELIEF VALVE	B/C	1
B21-RVF047F	MAIN STEAM LINE B PRESSURE RELIEF VALVE	B/C	1
B21-RVF051B	MAIN STEAM LINE B PRESSURE RELIEF VALVE	B/C	1
B21-RVF051C	MAIN STEAM LINE C PRESSURE RELIEF VALVE	B/C	1
B21-RVF051D	MAIN STEAM LINE D PRESSURE RELIEF VALVE	B/C	1
B21-RVF051G	MAIN STEAM LINE C AUTO DEPRESSURIZATION SYSTEM PRESSURE RELIEF VALVE	B/C	1

Description:

River Bend Station (RBS), SRVs, Crosby Model HB-65-DF.

Component/System Function:

The Main Steam Safety/Relief (MSSR) System provides Reactor Pressure Vessel (RPV) overpressure protection and automatic depressurization of the Nuclear System by opening the Safety/Relief Valves (SRVs). RBS USAR Section 5.2.2 describes the three main protection functions of the SRVs:

Overpressure relief operation – The valves open automatically to limit a vessel pressure excursion during a postulated pressurization transient event.

Overpressure safety function – The valves function as safety valves and open to prevent reactor vessel overpressurization.

Depressurization operation – The Automatic Depressurization System

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(ADS) valves open automatically as part of the emergency core cooling system (ECCS), or can be operated manually for events involving small breaks in the nuclear system process barrier.

The valves must open in order to prevent over-pressurization of the reactor coolant system thereby preventing failure of the reactor system due to overpressure. The overpressure relief operation is self-actuated (Safety Mode). The valves will open automatically on receipt of a signal to limit a pressure rise (Relief Mode).

Seven (7) of the sixteen (16) SRVs are a designated part of the ADS Emergency Core Cooling System (ECCS) and must open to provide automatic reactor depressurization as a result of a small break in the nuclear system for which the high pressure injection system cannot maintain reactor water level (ADS function).

In addition to the above, five (5) of the sixteen (16) SRVs are designated as part of the SRV Low-Low Set System. This system logic is called the Low-Low Set Relief logic.

Each protection function of the SRVs is to limit Reactor Coolant Pressure Boundary (RCPB) pressurization during upset conditions, with the exception of ADS. ADS functions to rapidly depressurize the reactor vessel to enable injection by the low pressure ECCS systems. The relief mode setpoints are lower than the safety mode set pressures to ensure sufficient margin between anticipated relief mode closing pressures and valve spring forces of the safety mode for proper seating of the valves upon receiving a close signal.

USAR Chapter 15.2 discusses the events which are expected to activate the SRVs.

2. Applicable ASME Code Edition and Addenda

ASME OM Code-2004 Edition, with Addenda through and including ASME OMB Code-2006.

3. Applicable Code Requirement(s)

Appendix I, Paragraph I-1320(a), 5-Year Test Interval, specifies that Class 1 pressure relief valves shall be tested at least once every 5 years, starting with initial electric power generation. No maximum limit is specified for the number of valves to be tested within each interval; a minimum of 20% of the valves from each valve group shall be tested within any 24-month interval. This 20% shall consist of valves that have not been tested during the current

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5-year interval, if they exist. The test interval for any individual valve shall not exceed 5 years.

4. Reason for Request

The Crosby Model HB-65-DF SRVs have shown exemplary test history at RBS, as described in Table 2. However, given the current 24-month operating cycle for RBS, Entergy Operations Incorporated (EOI) is required to remove and test fifty percent of the SRVs every refueling outage (i.e. eight of 16), so that all valves are removed and tested every two refueling outages. This ensures compliance with the ASME OM Code requirements for testing Class 1 pressure relief valves within a 5-year interval. Approval of extending the test interval to 6 years with a grace period of 6 months would reduce the minimum number of SRVs tested at RBS over three refueling outages by eight.

The ASME Code committees have developed Code Case OMN-17, "*Alternative Rules for Testing ASME Class 1 Pressure Relief/Safety Valves*" which was published via ASME OM Code-2009 Edition. This Code Case has not been approved for use in US NRC Regulatory Guide 1.192, "Operation and Maintenance Code Case Acceptability, ASME OM Code, Revision 1, dated August 2014. The Code Case allows the Owner to extend the test frequencies for Class 1 pressure relief valves to a 72-month (6-year) test interval providing all the requirements of the Code Case are satisfied. The Code applicability specified in the Code Case is, in part, ASME OM Code 2001 Edition through the 2006 Addenda of Appendix I, Section I-1320. This is consistent with the Interval Code of record for RBS. RBS currently meets or exceeds all the requirements specified in Code Case OMN-17. The Code Case OMN-17, is listed in the Draft Regulatory Guide DG-1297 (*Proposed Revision 2 to Regulatory Guide 1.192, dated March 2016*), and is listed in Table 1, Acceptable OM Code Cases, and as per 10 CFR 50.55a licensees or applicants are to implement the most recent version of a Code Case. River Bend is using OMN-17, as published in the 2012 Edition of the ASME OM Code.

All SRVs are located in the upper elevations of the RBS Drywell. The major contributors to radiation exposure are the Main Steam Lines, including the SRVs, and the High Pressure/Low Pressure Core Spray lines passing through the area. Removal of an installed SRV and installation of a replacement SRV requires installation of scaffolding, removal of insulation and various appurtenances on the SRV, and unbolting the SRV. Once unbolted, the SRV is maneuvered from its location and lowered to the grade

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elevation and transported through the drywell and containment equipment hatches. Each SRV weighs approximately 3000 pounds, and due to its size, a crew of five to seven personnel is necessary to safely move each valve.

Entergy has evaluated the historical cumulative radiation exposure at RBS for removal and replacement of SRVs from the last five RBS refueling outages. The work evolutions necessary to remove and replace these valves each refueling outage, which includes the removal and replacement of eight SRVs, are conducted under equivalent radiological conditions and with the same personnel requirements. This historical cumulative radiation exposure data is provided in Table 1.

Outage	RF-17	RF-16	RF-15	RF-14	RF-13
# SRV's Replaced.	8	8	8	8	8
Person-Rem	4.178	3.192	6.494	4.026	5.872

Based on this data, Entergy has concluded that the expected cumulative radiation exposure to remove and replace a single SRV would be approximately 0.594 person-rem. The outage specific variability of cumulative radiation exposure is attributed to the location of a particular valve relative to higher radiation fields, the physical configuration of surrounding equipment for a particular valve, and the impact of outage-specific plant configurations. Therefore, absent the requested relief, replacement of eight incremental SRVs would result in approximately 4.752 additional person-rem over three refueling outages.

5. Proposed Alternative and Basis for Use

As an alternative to the Code required 5-year test interval per Appendix I, paragraph I-1320(a), RBS proposes that the Class 1 pressure relief valves be tested at least once every three refueling cycles (approximately 6 years/72 months) with a minimum of 20% of the valves tested within any 24-month interval. This 20% would consist of valves that have not been tested during the current 72-month interval, if they exist. The test interval for any individual valve would not exceed 72 months except that a 6-month grace period is allowed to coincide with refueling outages to accommodate extended shutdown periods.

After as-found set pressure testing, the valves shall be disassembled and inspected to verify that parts are free of defects resulting from time-related degradation or service induced wear. As-left set pressure testing shall be

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performed following maintenance and prior to returning the valve to service. Each valve shall have been disassembled and inspected prior to the start of the 72 month interval. Disassembly and inspection performed prior to the implementation of Code Case OMN-17 may be used.

The relief valve testing and maintenance cycle at RBS consists of removal of the SRV complement requiring testing and transportation to an off-site test facility. Upon receipt at the off-site facility the valves are subject to an as-found inspection, seat leakage and set pressure testing. Prior to the return of a complement of SRVs for installation in the plant, 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 test interval. During this process, anomalies or damage are identified and resolved. Damaged or worn parts, springs, gaskets and seals are replaced as necessary. The valve seats are lapped, if necessary. Following reassembly, the valve's set pressure is recertified with an acceptance criterion of $\pm 1\%$. This existing process is in accordance with ASME OM Code Case OMN-17, Paragraphs (d) and (e).

RBS has reviewed the as-found set pressure test results for all of the SRVs tested since 2008 as detailed in Table 2. RBS has had only one as-found test failure since 2008 that exceeded the as-found acceptance criteria (+3%, -5%). The one as-found failure was in the negative (or conservative) direction.

TABLE 2 Summary of As-Found Test Results of SRV's

Valve ID	Set	As-Found	As-Found Test	Results
N63800-02-0046	1210	2-8-2008	1157	-4.4
N63800-02-0045	1205	2-8-2008	1167	-3.2
N63800-02-0117	1210	2-8-2008	1138	-6.0
N63800-02-0037	1195	2-9-2008	1208	+1.1
N63800-02-0044	1205	2-9-2008	1199	-0.5
N63800-02-0100	1205	2-9-2008	1202	-0.2
N63800-02-0036	1195	2-10-2008	1201	+0.5
N63800-02-0034	1195	2-10-2008	1211	+1.3
N63800-02-0098	1205	10-1-2009	1203	-0.2
N63800-02-0109	1195	10-1-2009	1170	-2.1
N63800-02-0121	1210	10-2-2009	1198	-1.0
N63800-02-0120	1210	10-2-2009	1164	-3.8
N63800-02-0097	1205	10-3-2009	1162	-3.6
N63800-02-0112	1195	10-3-2009	1183	-1.0
N63800-02-0111	1195	10-4-2009	1188	-0.6
N63800-02-0040	1195	10-4-2009	1154	-3.4
N63800-02-0035	1195	1-25-2011	1189	-0.5
N63800-02-0033	1195	1-25-2011	1193	-0.2
N63800-02-0038	1195	1-26-2011	1205	+0.8

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TABLE 2 Summary of As-Found Test Results of SRV's (continued)

Valve ID	Set	As-Found	As-Found Test	Results
N63800-02-0118	1210	1-26-2011	1156	-4.5
N63800-02-0115	1210	1-27-2011	1221	+0.9
N63800-02-0041	1205	1-27-2011	1203	-0.2
N63800-02-0043	1205	1-28-2011	1217	+1.0
N63800-02-0042	1205	1-28-2011	1211	+0.5
N63800-02-0110	1195	2-28-2013	1194	-0.1
N63800-02-0107	1195	2-28-2013	1181	-1.2
N63800-02-0095	1205	3-1-2013	1177	-2.3
N63800-02-0106	1195	3-1-2013	1193	-0.2
N63800-02-0081	1205	3-2-2013	1190	-1.2
N63800-02-0039	1195	3-2-2013	1185	-0.8
N63800-02-0117	1210	3-3-2013	1205	-0.4
N63800-02-0046	1210	3-3-2013	1219	+0.7

RBS submits that the proposed alternative of increasing the test interval for the Class 1 pressure relief valves from 5 years to 3 fuel cycles (approximately 6 years/72 months) would continue to provide an acceptable level of quality and safety while restoring the operational and maintenance flexibility that was lost when the 24-month fuel cycle created the unintended consequences of more frequent testing. This proposed alternative will continue to provide assurance of the valves' operational readiness and provides an acceptable level of quality and safety pursuant to 10 CFR 50.55a(z)(1).

6. Duration of proposed Alternative

This relief is requested for the fourth ten-year IST interval, which begins December 2, 2017 and is scheduled to end on December 1, 2027.

7. 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

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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.

In Reference 6, the NRC reviewed and approved a relief request for Monticello Nuclear Generating Station to extend the SRV test interval duration to three refueling outages or approximately 6 years, with a 6 month grace period, for the duration of the Fifth 10-year Inservice Testing interval.

This proposed relief request is consistent with the precedents, in that it will establish a test interval that would enable EOI to maintain a Crosby Model HB-65-DF SRV in service for three operating cycles, while also allowing adequate time to transport, test, and refurbish SRVs, at an external facility prior to reinstallation. This relief was granted by the NRC in 2015 for the 3rd Inservice Test Plan Interval at River Bend Station.

8. 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, LLC), "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.
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.
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.

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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.

6. Letter from U.S. NRC to Mr. Mark A. Schimmel (Northern States Power Company) "Monticello Nuclear Power Plant" – Relief from the Requirements of the American society of Mechanical Engineers Code for Operation and Maintenance of Nuclear Power Plants for the Fifth 10-Year Inservice testing Program Interval (TAC Nos. ME8067, ME8088, ME8089, ME8090, ME8091, ME8092, ME8093, ME8094, ME8095, and ME809).