April 17, 2006

Mr. Cornelius J. Gannon, Vice President
Shearon Harris Nuclear Power Plant
Carolina Power & Light Company
Post Office Box 165, Mail Code: Zone 1
New Hill, North Carolina 27562-0165

SUBJECT: SHEARON HARRIS NUCLEAR POWER PLANT, UNIT 1- RELIEF REQUEST 2R1-015 FOR THE SECOND 10-YEAR INSERVICE INSPECTION INTERVAL (TAC NO. MC8954)

Dear Mr. Gannon:

By letter dated November 18, 2005, as supplemented by letter dated February 8, 2006, Carolina Power and Light Company submitted Relief Request (RR) 2R1-015 for Shearon Harris Nuclear Power Plant, Unit 1 (HNP), requesting relief from the requirements of paragraph (g) of section 50.55a of Title 10, *Code of Federal Regulations* (10 CFR) and the system leak test requirements that are specified in Table IWB-2500-1, Examination Category B-P, and Paragraph IWA-5222(a) of Section XI of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code), Division 1. RR 2R1-015 is applicable to the second 10-year inservice inspection (ISI) interval for HNP and pertains to the system hydrostatic pressure test requirements for ASME Code Class 1 portions of the safety injection system, residual heat removal system, and for specified ASME Code Class 1 drain lines, vent lines, fill lines, and test lines.

The Nuclear Regulatory Commission staff's evaluation and conclusions are contained in the enclosed safety evaluation. The staff has determined that you have provided an acceptable basis for establishing that compliance with Section XI Table IWB-2500-1, Examination Category B-P, and Paragraph IWA-5222(a) would create a hardship for HNP, without a compensating increase in the level of quality and safety. The staff has also determined that you have proposed acceptable alternative system leak tests for these piping segments in lieu of performing the required system hydrostatic pressure tests. The proposed alternative provides reasonable assurance of structural integrity. Therefore, the staff concludes that the proposed alternative in RR 2R1-015 may be approved for the second 10-year ISI interval for HNP under the hardship provisions that are specified in 10 CFR 50.55a(a)(3)(ii).

Sincerely,

/RA/

Michael L. Marshall, Branch Chief
Plant Licensing Branch II-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-400

Enclosure: Safety Evaluation

cc w/encl: See next page

Mr. Cornelius J. Gannon, Vice President
Shearon Harris Nuclear Power Plant
Carolina Power & Light Company
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SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SECOND 10-YEAR INSERVICE INSPECTION INTERVAL PROGRAM

CAROLINA POWER AND LIGHT COMPANY

RELIEF REQUEST 2R1-015

SHEARON HARRIS NUCLEAR POWER PLANT, UNIT 1

DOCKET NO. 50-400

1.0 INTRODUCTION

By letter dated November 18, 2005, as supplemented by letter dated February 8, 2006, Carolina Power and Light Company (CP&L, licensee), submitted Relief Request (RR) 2R1-015 for Shearon Harris Nuclear Power Plant, Unit 1 (HNP), requesting relief from the requirements of paragraph (g) to section 50.55a of Title 10, *Code of Federal Regulations* (10 CFR), and the system leak test requirements that are specified in Table IWB-2500-1, Examination Category B-P, and Paragraph IWA-5222(a) of Section XI of the 1989 Edition of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code), Division 1 (Section XI). RR 2R1-015 is applicable to the second 10-year inservice inspection (ISI) interval for HNP and pertains to the system hydrostatic pressure test requirements for specified ASME Code Class 1 piping (line) segments in the HNP safety injection (SI) and residual heat removal (RHR) systems and for specified ASME Code Class 1 vent lines, drain lines, test lines, and fill lines (VDTF lines).

2.0 REGULATORY EVALUATION

Inservice inspection of ASME Code Class 1, 2, and 3 components is performed in accordance with Section XI and applicable addenda as required by 10 CFR 50.55a(g), except where specific written relief has been granted by the Commission pursuant to 10 CFR 50.55a(g)(6)(i). The regulation in 10 CFR 50.55a(a)(3) states, in part, that alternatives to the requirements of paragraph (g) may be used, when authorized by the Nuclear Regulatory Commission (NRC), if the licensee demonstrates that: (i) the proposed alternatives would provide an acceptable level of quality and safety or (ii) compliance with the specified requirements would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety.

Pursuant to 10 CFR 50.55a(g)(4), ASME Code Class 1, 2, and 3 components (including supports) shall meet the requirements, except the design and access provisions and the preservice examination requirements, set forth in Section XI, "Rules for Inservice Inspection of Nuclear Power Plant Components," to the extent practical within the limitations of design,

geometry, and materials of construction of the components. The regulations require that inservice examination of components and system pressure tests conducted during the first 10-year interval and subsequent intervals must comply with the requirements in the latest edition and addenda of Section XI incorporated by reference in 10 CFR 50.55a(b) 12 months prior to the start of the 120-month interval, as subject to the limitations in the rule.

3.0 TECHNICAL EVALUATION

3.1 Applicable Components

RR 2R1-015 is applicable to specific ASME Code Class 1 line segments in the SI and RHR systems and to specific ASME Code Class 1 VDTF line segments. The applicable line segments are listed in Reference 1, as amended by Reference 3. The table attached to this safety evaluation (SE) identifies the components that are within the scope of RR 2R1-015. The table also identifies the valves that define the boundaries of the applicable line segments.

The applicable SI, RHR, and VDTF line segments are categorized as ASME Code Class 1 because the line segments are aligned to the reactor coolant pressure boundary (RCPB) out to and inclusive of the second containment isolation valves (CIVs) for the systems. With the exception of the applicable RHR line segments, each of the line segments is isolated from the RCPB by self-actuating check valves (CVs).

For the RHR line segments, the CIVs are motor-operated flow control valves (FCVs). The FCVs are interlocked to ensure redundant isolation of the RCPB from the ASME Code Class 2 portion of the RHR, which is subject to a lower design pressure. The Technical Requirements Manual for HNP specifies that the licensee should maintain the FCVs in the closed and de-energized configuration prior to raising the reactor coolant system (RCS) pressure above 425 psig. Plant operating instructions specify that the FCVs are to be maintained in the closed configuration prior to raising the RCS pressure above 370 psig or the RCS temperature above 350 degrees Fahrenheit (EF).

3.2 Applicable Code Edition and Requirements

The licensee requested relief from the following Section XI requirements, as invoked by reference in 10 CFR 50.55a(g)(4):

- Section XI, Table IWB-2500-1, Examination Category B-P, "All Pressure Retaining Components," Inspection Item B15.51, "Piping," and Inspection Item B15.71, "Valves": Inspection Items B15.51 and B15.71 require that the licensee perform inservice hydrostatic pressure tests and VT-2 visual examinations of all ASME Code Class 1 pressure retaining piping and valves in accordance with the requirements of Section XI, Paragraph IWB-5222. The inspection items require that the inservice hydrostatic pressure test be performed at a frequency of once every 10-year ISI interval.

- Section XI, Paragraph IWB-5222 and Table IWB-5222-1: In response to a request for additional information (RAI), the licensee clarified that, pursuant to 10 CFR 50.55a(a)(3)(ii), relief is also being requested from compliance with the requirements of Section XI, Paragraph IWB-5222(a) and Table IWB-5222-1, which pertain to requirements for pressurizing the RCPB during hydrostatic pressure tests. The nominal

operating temperature of the RCPB at 100 percent rated power is above 500 EF. The nominal operating pressure of the RCPB at 100 percent rated power is 2235 pounds per square inch gauge (psig). Thus, Table IWB-5222-1 requires that the licensee perform the required hydrostatic pressure test at a test pressure of 2280 psig (i.e., 1.02 X 2235 psig).

- In response to the RAI from the NRC staff, the licensee confirmed that the applicable line segments do not include any pumps. Therefore, Inspection Item B15.61 in Section XI, Table IWB-2500-1, Examination Category B-P does not need to be included within the scope of the relief request.

- In its response to the RAI from the NRC staff, the licensee clarified that the code of record for HNP is the 1989 Edition of Section XI, without applicable addenda.

3.3 BASIS FOR THE RELIEF REQUEST

The applicable RHR, SI, and VDTF line segments are each designed with two system CIVs in order to comply with the requirements of 10 CFR Part 50, Appendix, A, "General Design Criteria," Criterion 55, *Reactor Coolant Pressure Boundary Penetrating Containment*. The RCPB extends to and is inclusive of the second CIVs in the line segments.

The licensee is requesting relief from complying with the requirements that are specified in: (1) Section XI, Table IWB-2500-1, Examination Category B-P, Inspection Items B15.51 and B15.71; (2) Section XI, Paragraph IWB-5222(a); and (3) Section XI, Table IWB-5222-1. The licensee stated that the relief is being requested for the second 10-year ISI interval for HNP.

The licensee stated that implementation of the required hydrostatic pressure tests on the applicable RHR, SI, and VDTF line segments would require either: (1) opening up the first CIV in the line segments, (2) installing temporary bypasses around the first CIVs, or (3) modifying the systems to bypass the first CIVs. The licensee stated that implementing any of these actions would require the licensee to defeat the double containment isolation function of the inboard and outboard CIVs, as required to be configured in the closed position when operating in MODES 1, 2, or 3. The licensee stated that this would constitute a hardship for the facility as defined in 10 CFR 50.55a(a)(3)(ii).

3.4 Proposed Alternative

In lieu of complying with the applicable hydrostatic pressure test requirements, the licensee proposed to perform alternative system leak tests of the applicable line segments (including the valves in the segments). In response to the RAI from the NRC staff, the licensee confirmed that it is applying the methods of Code Case N-498-4 as the basis for performing its alternative system leak tests and VT-2 visual examinations of the applicable line segments, including the provisions in paragraphs (a)(3) and (a)(4) of the Code Case for minimum hold time and test temperature requirements. Since the licensee clarified that it is applying the alternative system leak test criteria of Code Case N-498-4 without exception, the NRC staff considers the licensee's alternative acceptable.

In its response to the RAI from the NRC staff, the licensee clarified that the alternative system leak tests will be at the nominal operating pressures for the applicable SI, RHR, and VDTF line

segments, as configured to containment isolation when in MODE 3. In addition, the licensee clarified that test pressures and temperatures for the alternative leak tests are as specified below:

- *ASME Code Class 1 Low Pressure Safety Injection Line Segments*: The licensee stated that the lines are aligned to the SI accumulators and, thus, the test pressures will range from 585 - 665 psig. The test temperatures will be at ambient containment temperature (i.e., < 120 EF).

- *ASME Code Class 1 RHR Line Segments and ASME Code Class 1 High Pressure Safety Injection Line Segments Aligned to the Cold Leg Loop*: The lines are aligned to the RHR system when in MODES 4 and 5. The licensee stated that when RHR is removed from service prior to reaching MODE 3, the line segments will be at an elevated temperature and pressure. The licensee stated that when the RHR motor operated valves are closed for retiring the RHR, the elevated temperatures and pressures will be maintained in the line segments located between the first and second CIVs. The licensee therefore stated that the test pressure will range from 325 - 360 psig and the test temperature will range from 300 - 350 EF.

- *ASME Code Class 1 High Pressure Safety Injection Line Segments Aligned to the Hot Leg Loop*: The licensee stated that flow is not established through the applicable line segments during ascension to MODE 3, or while in MODE 3. Therefore, the applicable line segments will be subject to the elevated head pressure for the high pressure SI system while in MODE 3. The licensee stated that the test temperature will be at the ambient containment temperature (i.e., < 120 EF).

- *ASME Code Class 1 VDTF Lines*: The licensee stated that the alternative pressure test will not pressurize the line segments located after the first containment isolation valves to the required nominal operating pressure for the RCPB.

3.5 NRC Staff Evaluation

ASME Code Case N-498-4, “Alternative Requirements for 10-Year System Hydrostatic Testing for Class 1, 2, and 3 Systems, Section XI, Division 1,” was issued by the ASME Main Committee on February 15, 1999. The Code Case provides the committee’s alternative requirements for performing leak testing of ASME Code Class 1 systems in lieu of the hydrostatic pressure tests that are required in accordance with Section XI Table IWB-2500-1, Examination Category B-P, Section XI Paragraph IWB-5222(a), and Section XI, Table IWB-5222-1. The Code Case also provides alternative leak test requirements for systems that are classified as ASME Code Class 2 or 3.

The NRC has endorsed ASME Code Case N-498-4 (by reference in 10 CFR 50.55(b)(5) and in Regulatory Guide 1.147, Revision 14) as an acceptable ASME Code Case for implementation without exception and has determined that the alternative system leak tests in the Code Case provide an acceptable level of quality and safety in lieu of complying with the system hydrostatic pressure test requirements for ASME Code Class 1 components.

The licensee's proposed alternative system leak tests are intended to test the subject line segments at the corresponding system test pressures and temperatures when the systems are configured to MODE 3. The following bases establish how the licensee's alternative system leak test methods conform to the provisions in ASME Code Case N-498-4:

1. Performing the test in MODE 3 "Hot Standby," will conform to paragraph (a)(1) of the Code Case because the test will be performed prior to changing the MODE switch to MODE 2, "Startup."

2. The licensee's alternative system leak test of the RCPB will conform to paragraphs (a)(2) and (a)(5) of the Code Case because the alternative leak tests will be performed over the entire length of the applicable line segments (inclusive of the applicable CIVs).

3. Paragraph (a)(3) of the Code Case permits the testing of the isolated portions of the RCPB during normal operations to be performed at lower test pressures and temperatures. Normal operations for the facility include times during scheduled shutdowns and anticipated operational transients. The licensee will use the plant pressurizer heaters to heat and pressurize the RCPB to the recommended test pressures and temperatures of the Code Case, as subject to the configuration for containment isolation in MODE 3. Therefore, the licensee can implement the alternative system leak tests while in MODE 3 and still conform to paragraph (a)(3) of the Code Case.

4. The NRC staff has confirmed that the test temperatures and pressures for the alternate system leak tests are lower than the plant's pressure-temperature limit curve in Technical Specification Figure 3.4-2 for performing the hydrostatic pressure test. Therefore, the proposed alternative conforms to paragraph (a)(4) of the Code Case.

For the isolated portions of the RCPB, the alternative pressures and temperatures defined in Section 3.4 of this SE represent the highest test pressures and temperatures that can be achieved without defeating the double containment isolation design requirement for the systems in MODE 3, or without requiring significant design modifications. Evidence of pressure boundary leakage that is detected during implementation of the alternative system leak tests will require the licensee to enter the degraded pressure boundary components into the "Corrective Actions," provisions of Section XI, Paragraph IWA-5250.

Pressurization of the subject line segments in accordance with applicable hydrostatic test requirements would require the licensee to defeat the double containment isolation design requirement or implement significant plant modifications. Either approach would subject the licensee to a hardship. Based on its endorsement of ASME Code Case N-498-4, the staff concludes that the licensee's proposed alternative system leak tests will provide reasonable assurance of continued leakage integrity of the subject components and systems. Furthermore, the licensee performs additional examinations of the RCPB in accordance with other Examination Categories in Section XI, Table IWB-2500-1 and also performs augmented system walkdowns of the RCPB for evidence of boric acid leakage as part of its Generic Letter 88-01 inspections. These additional examinations provide additional monitoring of the structural integrity of the RCPB. Therefore, the staff has determined that requiring compliance

with the applicable Code provisions, as opposed to authorizing the licensee's proposed alternative, would provide no compensating increase in quality and safety.

Based on this assessment, the NRC staff concludes that compliance with the hydrostatic pressure test requirements during the second 10-year ISI interval will create a hardship for the licensee. The staff also concludes that licensee has proposed acceptable alternative system leak tests for these line segments.

4.0 NRC STAFF CONCLUSION

The NRC staff has reviewed RR 2R1-015, along with the proposed alternative system leak tests for the ASME Code Class 1 SI, RHR, and VDTF line segments against the hardship provisions of 10 CFR 50.55a(a)(3)(ii). Based on its evaluation, the staff concludes that: (1) licensee has provided a sufficient basis to demonstrate that compliance with the requirements of Section XI, Table IWB-2500-1, Examination Category B-P, Inspection Items B15.51 and B15.71; Section XI, Paragraph IWB-5222; and Section XI, Table IWB-5222-1 (as applied to these line segments) would create a hardship for HNP without a compensating increase in the level of quality and safety, (2) licensee's proposal provides acceptable alternative system leak tests for these line segments, and (3) the proposed alternative provides reasonable assurance of structural integrity. Therefore, based on the staff's assessment, the staff concludes that RR 2R1-015 may be granted for the second 10-year ISI interval pursuant to the hardship provisions of 10 CFR 50.55a(a)(3)(ii).

5.0 REFERENCES

1. Serial Letter No. HNP-05-128 from C. S. Kamilaris (CP&L) to the NRC Document Control Desk, *Shearon Harris Nuclear Plant, Unit 1, Docket No. 50-400/License No. NPF-63, Relief Request From Inservice Inspection Program No. 2R1-015, Alternative to ASME Code Section XI IWA-4000 Requirements*, November 18, 2005.

2. 1989 Edition of the ASME Code, Section XI, Division 1, *Rules for Inservice Inspection of Nuclear Power Plant Components.*

3. Serial Letter No. HNP-06-007 from C. S. Kamilaris (CP&L) to the NRC Document Control Desk, *Shearon Harris Nuclear Plant, Unit 1, Docket No. 50-400/License No. NPF-63, Response to Request for Additional Information on the Relief Request from Inservice Inspection Program No. 2R1-015, Alternative to ASME Code Section XI IWA-4000 Requirements,* February 8, 2006.

Principal Contributor: James Medoff

Date: April 17, 2006

Attachment: As stated

RELIEF REQUEST 2R1-015 TABLE AFFECTED CLASS 1 PRESSURE RETAINING COMPONENTS – EXAMINATION CATEGORY B-P			
Affected Line or Component	Pipe Diameter (in.)	Approx Length (ft.)	Boundary Exception(s)
Loop Drain Line Isolation Valve	2	≤ 1 ft.	Valve 1RC-7 remains closed to avoid pressurizing downstream Class 1 pipe and valve 1RC-8
Loop Drain Line Isolation Valve	2	≤ 1 ft.	Valve 1RC-16 remains closed to avoid pressurizing downstream Class 1 pipe and valve 1RC-17
Loop Drain Line Isolation Valve	2	≤ 1 ft.	Valve 1RC-28 remains closed to avoid pressurizing downstream Class 1 pipe and valve 1RC-29
Pressurizer PORV Vent Line on Primary Sample Path off Pressurizer	0.75	0.5 ft.	Valve 1RC-110 remains closed to avoid pressurizing downstream Class 1 pipe and valve 1RC-111
Instrument Vent Line on Pressurizer Level Instrument Loop 1LT-459	0.5	0.5 ft.	Valve 1RC-984 remains closed to avoid pressurizing downstream Class 1 pipe and valve 1RC-985
Instrument Vent Line on Pressurizer Level Instrument Loop 1LT-460	0.5	0.5 ft.	Valve 1RC-986 remains closed to avoid pressurizing downstream Class 1 pipe and valve 1RC-987
Instrument Vent Line on Pressurizer Level Instrument Loop 1LT-461	0.5	0.5 ft.	Valve 1RC-988 remains closed to avoid pressurizing downstream Class 1 pipe and valve 1RC-989
CVCS Pressurizer Spray Downstream CV and Test Connection Isolation Valve	2	≤ 1 ft.	Check valve to remain closed to avoid disassembly or other temporary configurations required to achieve test pressures at upstream piping and valves 1CS-491 and 1CS-488
	1	1.5 ft.	Valve 1CS-489 remains closed to avoid pressurizing downstream Class 1 pipe and valve 1CS-490

Attachment

RELIEF REQUEST 2R1-015 TABLE Affected Class 1 Pressure Retaining Components – Examination Category B-P			
Affected Line or Component	Pipe Diameter (in.)	Approx Length (ft.)	Boundary Exception(s)
Norm Charging Line Upstream CV and Test Connection Isolation Valve	3	≤ 1 ft.	Check valve to remain closed to avoid disassembly or other temporary configurations required to achieve test pressures at upstream piping and valves 1CS-500 and 1CS-497
	1	1.5 ft.	Valve 1CS-498 remains closed to avoid pressurizing downstream Class 1 pipe and valve 1CS-499
Alt Charging Line Upstream CV and Test Connection Isolation Valve	3	≤ 1 ft.	Check valve to remain closed to avoid disassembly or other temporary configurations required to achieve test pressures at upstream piping and valves 1CS-486 and 1CS-483
	1	1.5 ft.	Valve 1CS-484 remains closed to avoid pressurizing downstream Class 1 pipe and valve 1CS-485
Excess Letdown Upstream Isolation Valve	1	1.5 ft.	Valve 1CS-460 remains closed to avoid pressurizing downstream Class 1 pipe and valve 1CS-461
Between Accumulator 1A-SA Discharge CV and SI to RCS Loop “A” CV	12	26	Check valve to remain closed to avoid disassembly or other temporary configurations required to achieve test pressures at upstream piping and valves 1SI-249 and 1SI-250
	1	2	Valve 1SI-273 remains closed to avoid pressurizing downstream Class 1 pipe and valve 1SI-274
Between Accumulator 1B-SB Discharge CV and SI to RCS Loop “B” CV	12	28	Check valve to remain closed to avoid disassembly or other temporary configurations required to achieve test pressures at upstream piping and valves 1SI-251 and 1SI-252
	1	2	Valve 1SI-275 remains closed to avoid pressurizing downstream Class 1 pipe and valve 1SI-276
Between Accumulator 1C-SA Discharge CV and SI to RCS Loop “C” CV	12	26	Check valve to remain closed to avoid disassembly or other temporary configurations required to achieve test pressures at upstream piping and valves 1SI-253 and 1SI-254
	1	2	Valve 1SI-277 remains closed to avoid pressurizing downstream Class 1 pipe and valve 1SI-278

RCS Loop to RHR Pump "B" Isolation and Drain Line	12	86	Valves 1RH-39 and 1RH-40 remain closed to avoid over-pressurization of the RHR system
	1	2	Valve 1SI-41 remains closed to avoid pressurizing downstream Class 1 pipe and valve 1SI-42

RELIEF REQUEST 2R1-015 TABLE Affected Class 1 Pressure Retaining Components – Examination Category B-P			
Affected Line or Component	Pipe Diameter (in.)	Approx Length (ft.)	Boundary Exception(s)
RCS Loop to RHR Pump "A" Isolation and Drain Line	12	86	Valves 1RH-1 and 1RH-2 remain closed to avoid over-pressurization of the RHR system
	1	2	Valve 1RH-3 remains closed to avoid pressurizing downstream Class 1 pipe and valve 1RH-4
RCS Cold Leg Loop 1 SIS, Boron injection, and CVCS paths.	6	38	Check valve to remain closed to avoid disassembly or other temporary configurations required to achieve test pressures at upstream piping and valves 1SI-81, 1SI-356, 1SI-8, and 1SI-72
	2	68	
	2	3	
	1	1.5	Valve 1SI-27 remains closed to avoid pressurizing downstream Class 1 pipe and valve 1SI-28
	1	1.5	Valve 1SI-79 remains closed to avoid pressurizing downstream Class 1 pipe and valve 1SI-80
Class 1 piping from Residual Heat Exchanger to RCS Cold Leg Loop 2.	6	33	Check valve to remain closed to avoid disassembly or other temporary configurations required to achieve test pressures at upstream piping and valves 1SI-82, 1SI-357, 1SI-9, and 1SI-73
	2	83	
	2	7	
	1	1.5	Valve 1SI-33 remains closed to avoid pressurizing downstream Class 1 pipe and valve 1SI-34
	1	1.5	Valve 1SI-75 remains closed to avoid pressurizing downstream Class 1 pipe and valve 1SI-76
Class 1 piping from Residual Heat Exchanger to RCS Cold Leg Loop 3.	6	25.5	Check valve to remain closed to avoid disassembly or other temporary configurations required to achieve test pressures at upstream piping and valves 1SI-83, 1SI-358, 1SI-10, and 1SI-74
	2	49.5	
	2	1.5	
	1	1.5	Valve 1SI-39 remains closed to avoid pressurizing downstream Class 1 pipe and valve 1SI-40
	1	1.5	Valve 1SI-77 remains closed to avoid pressurizing downstream Class 1 pipe and valve 1SI-78
Class 1 piping from Residual Heat Exchanger to RCS Hot Leg Loop 1.	6	43	Check valve to remain closed to avoid disassembly or other temporary configurations required to achieve test pressures at upstream piping and valves 1SI-136, 1SI-134, 1SI-104, and 1SI-127
	2	2.5	
	2	2.5	
	1	1.5	Valve 1SI-376 remains closed to avoid pressurizing downstream Class 1 pipe and valve 1SI-377
Class 1 piping from Residual Heat Exchanger to RCS Hot Leg Loop 2.	6	44.5	Check valve to remain closed to avoid disassembly or other temporary configurations required to achieve test pressures at upstream piping and valves 1SI-137, 1SI-135, 1SI-105, and 1SI-128
	2	2.5	
	2	2.5	
	1	1.5	Valve 1SI-132 remains closed to avoid pressurizing downstream Class 1 pipe and valve 1SI-133

RELIEF REQUEST 2R1-015 TABLE Affected Class 1 Pressure Retaining Components – Examination Category B-P			
Affected Line or Component	Pipe Diameter (in.)	Approx Length (ft.)	Boundary Exception(s)
Class 1 piping from Residual Heat Exchanger to RCS Hot Leg Loop 3.	6	1	Check valve to remain closed to avoid disassembly or other temporary configurations required to achieve test pressures at upstream piping and valves 1SI-138, 1SI-106, and 1SI-129
	2	42.5	
	2	1	
	2	1	
	1	1.5	Valve 1SI-130 remains closed to avoid pressurizing downstream Class 1 pipe and valve 1SI-131

cc:
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