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

January 14, 2014

Mr. Mano Nazar
Executive Vice President and
Chief Nuclear Officer
Florida Power & Light Company
P.O. Box 14000
Juno Beach, Florida 33408-0420

SUBJECT: TURKEY POINT NUCLEAR GENERATING UNIT NOS. 3 AND 4 - SAFETY EVALUATION FOR RELIEF REQUEST NO. 12 FOR FOURTH 10-YEAR INSERVICE INSPECTION INTERVALS – SYSTEM LEAKAGE TEST BOUNDARIES OF CLASS 1 COMPONENTS (TAC NOS. MF1903, MF1904, MF1905, MF1906, MF1907, AND MF1908)

Dear Mr. Nazar:

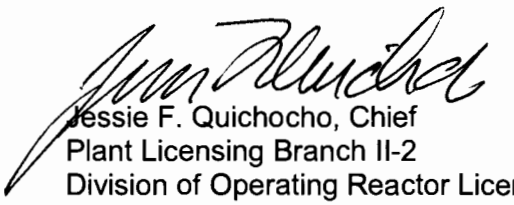
By letter to the U.S. Nuclear Regulatory Commission (NRC or the Commission) dated May 24, 2013, as superseded by letter dated October 9, 2013, Florida Power & Light Company (the licensee) submitted Relief Request No. 12 for the Turkey Point Nuclear Generating Unit Nos. 3 and 4 (Turkey Point 3 and 4). Pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR), Paragraph 50.55a(a)(3)(ii), the licensee proposed alternatives to the requirements of 10 CFR 50.55a(g)(4) on the basis that complying with the specific requirement would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety. Specifically, the licensee proposed alternatives to the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code (Code), Section XI, Paragraph IWB-5222(b) requirements to fully pressurize piping between the first and second isolation device in order to perform a system leakage test on small bore size vent and drain lines in the reactor coolant system and in the segments of the residual heat removal and safety injection loop piping.

The NRC staff reviewed the subject request and concludes, as set forth in the enclosed safety evaluation, that the licensee adequately addressed all regulatory requirements in 10 CFR 50.55a(a)(3)(ii). Accordingly, the NRC staff authorizes Relief Request No. 12 at Turkey Point 3 and 4 for the remainder of the fourth 10-year inservice inspection (ISI) intervals of Turkey Point 3 and 4, which are currently scheduled to end on February 21 and April 14, 2014, respectively. The licensee may invoke the provision of the ASME Code, Section XI, paragraph IWA-2430, which allows the licensee to extend the fourth 10-year ISI intervals by 1 year. The licensee may perform the proposed alternative in the 1-year extension periods.

All other ASME Code, Section XI requirements for which the request was not specifically requested and approved remains applicable, including third-party review by the Authorized Nuclear Inservice Inspector.

If you have any questions regarding this issue, please contact the project manager, Ms. Audrey Klett, at (301) 415-0489 or by e-mail at Audrey.Klett@nrc.gov.

Sincerely,



Jessie F. Quichocho, Chief
Plant Licensing Branch II-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-250 and 50-251

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 NO. 12

FOR THE FOURTH 10-YEAR INSERVICE INSPECTION INTERVAL

FLORIDA POWER & LIGHT COMPANY

TURKEY POINT NUCLEAR GENERATING UNIT NOS. 3 AND 4

DOCKET NOS. 50-250 AND 50-251

1.0 INTRODUCTION

By letter dated May 24, 2013 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML13164A186), as superseded by letter dated October 9, 2013 (ADAMS Accession No. ML13303B561), Florida Power & Light Company (the licensee) submitted Relief Request No. 12 (RR 12) to the U.S. Nuclear Regulatory Commission (NRC or the Commission) for review and authorization. The licensee submitted RR 12 for the fourth 10-year inservice inspection (ISI) intervals of the Turkey Point Nuclear Generating Unit Nos. 3 and 4 (Turkey Point 3 and 4). Pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR), Part 50, Paragraph 50.55a(a)(3)(ii), the licensee requested authorization to use the proposed alternative to 10 CFR 50.55a(g)(4) because complying with a specified requirement would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety. Specifically, the licensee requested to use an alternative to the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code (Code), Section XI, Paragraph IWB-5222(b) requirements to fully pressurize piping between the first and second isolation device in order to perform a system leakage test on small bore size vent and drain lines in the reactor coolant system (RCS), segments of the residual heat removal (RHR) piping, and segments of the safety injection loop piping.

By electronic mail dated September 9, 2013 (ADAMS Accession No. ML13282A185), the NRC sent the licensee a request for additional information (RAI) regarding the relief request. By letter dated October 9, 2013, the licensee responded to this request.

The licensee requested to use the proposed alternative for Turkey Point 3 and 4 until the end of the fourth 10-year ISI intervals. The Turkey Point 3 fourth 10-year ISI interval is scheduled to end on February 21, 2014, and the Turkey Point 4 fourth 10-year ISI interval is scheduled to end on April 14, 2014. However, the licensee may invoke the provision of the ASME Code, Section XI, Paragraph IWA-2430, which allows the licensee to extend the fourth 10-year ISI intervals by 1 year. Extending the fourth 10-year ISI intervals would be necessary because the licensee extended previous refueling outages to install power uprate modifications.

2.0 REGULATORY EVALUATION

Pursuant to 10 CFR 50.55a(g)(4), ASME Code Class 1, 2, and 3 components (including supports) must meet the requirements, except the design and access provisions and the pre-service examination requirements, set forth in the ASME Code, 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. Pursuant to 10 CFR 50.55a(g)(4)(i) and 10 CFR 50.55a(g)(4)(ii), inservice examination of components and system pressure tests conducted during the first 10-year inspection interval and subsequent 10-year inspection intervals must comply with the requirements in the latest edition and addenda of Section XI of the ASME Code incorporated by reference in 10 CFR 50.55a(b) 12 months prior to the start of the 120-month inspection interval, subject to the limitations and modifications listed therein.

Pursuant to 10 CFR 50.55(a)(3)(ii), alternatives to the requirements of 10 CFR 50.55a(g) may be used when authorized by the Director of the NRC Office of Nuclear Reactor Regulation if compliance with the specified requirements would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety.

Based on its analysis of the regulatory requirements, the NRC staff finds that the regulatory authority exists to authorize the licensee's proposed alternative on the basis that compliance with the specified requirements would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety. Accordingly, the NRC staff reviewed and evaluated the licensee's request pursuant to 10 CFR 50.55a(a)(3)(ii).

The code of record for the Turkey Point 3 and 4 fourth 10-year ISI intervals is the 1998 Edition with Addenda through 2000 of the ASME Code, Section XI.

3.0 TECHNICAL EVALUATION

3.1 Licensee's Proposed Alternative

The components for which the licensee is seeking proposed alternatives are listed in Table 1 of the licensee's letter dated October 9, 2013, and are listed in the attachment to this safety evaluation.

The code of record for the Turkey Point 3 and 4 fourth 10-Year ISI intervals is the ASME Code, Section XI, 1998 Edition through the 2000 Addenda. The Turkey Point 3 fourth 10-year ISI interval began on February 22, 2004, and is scheduled to end on February 21, 2014. The Turkey Point 4 fourth 10-year ISI interval began on April 15, 2004, and is scheduled to end on April 14, 2014. Because of the extended refueling outages for the power uprate plant modifications, the licensee stated that it may invoke the provision of ASME Code, Section XI, Paragraph IWA-2430(d)1. This paragraph allows the licensee to extend the fourth 10-year ISI interval by 1-year to complete the required ISIs during the refueling outages for Cycle 27 of Turkey Point 3 and Cycle 28 of Turkey Point 4, respectively, and to credit those inspections and examinations to the fourth 10-year ISI intervals.

ASME Code, Section XI, Table IWB-2500-1, Section IWB-5200, "System Test Requirements," Subsection IWB-5222, "Boundaries," Paragraph (b), requires that "[t]he pressure retaining

boundary during the system leakage test conducted at or near the end of each inspection interval shall extend to all Class 1 pressure retaining components within the system boundary." The licensee proposed an alternative to this requirement that uses leakage testing. The licensee proposed that the Class 1 system boundary be maintained in a normal operational alignment during leakage tests for the items identified within Table 1 of its letter dated October 9, 2013, constituting exceptions to the Code-required boundary of IWB 5222(b). The VT-2 visual examination will extend to the Class 1 pressure retaining components within the system boundary during the performance of each system leakage test required by Table IWB-2500-1 examination category B-P. The licensee stated that the items within Table 1 of its letter dated October 9, 2013, will be visually examined for evidence of leakage during system leakage testing without being pressurized.

The licensee's basis for requesting the proposed alternative consisted of the following. The ASME Code required leakage test would be performed in Mode 3 at the normal operating temperature and pressure. However, leakage testing of these piping segments at nominal operating pressure in Mode 3 would require the opening of the inboard isolation valve at the normal operating RCS temperature and pressure conditions. In doing so, the design requirement for two primary coolant pressure boundary isolation devices would be violated. Additionally, opening of these valves introduces the potential risk for spills and personnel contamination. For configurations where blind flanges or caps are installed as isolation devices, opening of the inboard valve introduces the possibility of a personnel safety hazard if a flange or cap fails in the presence of inspection personnel. In addition, the licensee performs a VT-2 visual examination on these piping segments through the entire length as part of the Class 1 system inspection at the conclusion of each refueling outage. This leakage test does not specifically pressurize past the first isolation valve. This leakage test is also considered successful when no external or visible leakage is identified. Because this type of test assures that the combined first and second isolation devices are effective in maintaining the reactor coolant pressure boundary at normal operating temperature and pressure, the increase in safety achieved from the code required leakage test (IWB-5222(b)) is not commensurate with the hardship of performing such code required leakage testing.

The licensee cited the following precedent: "H.B. Robinson Steam Electric Plant Unit No. 2, Relief Request 4 for the Fifth 10-Year Interval Inservice Inspection Program Plan (TAC No. ME8255)" (ADAMS Accession No. ML12181A126).

3.2 NRC Staff's Evaluation

The ASME Code, Section XI requires that the pressure retaining boundary be extended to all Class 1 pressure-retaining components within the system boundary during the system leakage test conducted at or near the end of each inspection interval. The subject piping segments provide the design-required double isolation barrier for the reactor coolant pressure boundary. The Code-required leakage test would be performed in Mode 3 while the components are at normal operating pressure and temperature.

The subject piping is seamless schedule 160, A-376, type 316 stainless steel. In response to the NRC staff's RAI, the licensee stated that a review of the ISI reports and corrective action program database indicate that there is no history of degradation, such as fatigue or stress corrosion cracking, of the subject lines.

RCS Vent, Drain, Test, and Fill Lines

In response to the NRC staff's RAI, the licensee stated that pressurizing the subject vent and drain lines to the required pressure would result in an estimated radiological dose of 280 milli-roentgen equivalent man (mrem) for Turkey Point 3 and 344 mrem for Turkey Point 4. Based on as low as reasonably achievable considerations, as well as the potential risk for spills and personnel contamination, and personnel safety hazard if a flange or cap fails in the presence of inspection personnel, the NRC staff finds that performing the ASME Code required pressure test on the subject lines would present a hardship.

The licensee requested to use an alternative to fully pressurizing piping between the first and second isolation device on small bore size vent, drain, test, and fill lines in the RCS, which range in size from 0.5 to 2 inches. The configurations are either two small isolation valves in series, a valve and blind flange, or a valve and cap. In certain configurations, the piping between the two isolation boundaries will tee to a third valve that is also the second isolation boundary. These lines are not pressurized during normal service except as the result of leakage of the upstream valve. If the upstream valve does not leak during service, then the subject lines would not be pressurized and would only be subjected to low usage service conditions where degradation is not expected. If the upstream valve did leak during service, then the subject lines would be pressurized, and the VT-2 visual examination at the end of each refueling outage would provide reasonable assurance of structural integrity and leak tightness. The NRC staff finds that based on the materials of construction, low usage service conditions, and the VT-2 visual examination of the segments conducted at the end of each refueling cycle, there is reasonable assurance of structural integrity and leak tightness of the subject piping.

14-inch RHR Motor Operated Valves (MOV) Segment

In response to the NRC staff's RAI, the licensee stated that pressurizing the segment between the RHR inlet MOVs 750 and 751 would require that MOV-3/4-750 be bypassed by installing a pipe jumper. This pipe jumper would experience RCS pressure and temperature conditions. Risks associated with using a pipe jumper include the possibility of overpressurizing the RHR system should the RHR Inlet valves MOV-3-751 or MOV-4-751 fail. Additionally, if a leak develops at the pipe jumper, it could result in an unisolable RCS leak, and testing and supporting personnel would be at risk from the leakage being at RCS conditions. The NRC staff finds that modification of the existing configuration to permit the required pressure testing and the risks associated with performing the ASME Code required pressure test on the subject lines would present a hardship.

The licensee stated that this segment of pipe experiences pressures equivalent to reactor cavity static head and up to 450 pounds per square inch gauge during normal RHR operation. Although this 14-inch diameter segment is isolated from the RCS, it is possible that the segment of pipe between MOV-3/4-750 and MOV-3/4-751 can become pressurized from minor leak-by past the first isolation valve during normal plant operations. The NRC staff finds that because the subject segment is pressurized to RHR system pressure for a significant period of time during a refueling outage, the VT-2 visual examination at the end of each refueling outage provides reasonable assurance of structural integrity and leak tightness.

Safety Injection Loops High Head Check Valves 3-874A/B, 4-874A/B, and Upstream Piping Segments

In response to the NRC staff's RAI, the licensee stated that in order to pressurize the safety injection loop high head check valves and upstream piping lines, the high head check valve needs to be temporarily modified by removing its internals. This modification would create a configuration where only one isolation valve will be available to prevent overpressurizing the high head safety injection system. At the completion of this evolution, the affected pipe segment would need to be depressurized in order to restore the affected check valve to its original configuration. Another option would be to bypass one of the high head check valves by installing a pipe jumper. However, the pipe jumper would experience RCS pressure and temperature conditions. If a leak develops at the pipe jumper, it could result in an unisolable RCS leak, and testing and supporting personnel would be at risk from the leakage being at RCS conditions. The NRC staff finds that modification of the existing configuration to permit the required pressure testing and the risks associated with performing the ASME Code required pressure test on the subject lines would present a hardship.

In response to the NRC staff's RAI concerning whether it is possible to pressurize these lines to a pressure associated with operation of the high head safety injection pump, the licensee stated that performance of the safety injection system full flow test during a refueling outage when the reactor head is removed and the reactor cavity is flooded results in pressurization of the subject lines. A VT-2 visual examination of the subject piping is then performed while a safety injection pump is running. The NRC staff finds that because the subject segment is pressurized during the safety injection system full flow test during a refueling outage and a VT-2 visual examination is performed, there is reasonable assurance of structural integrity and leak tightness.

Based on the above analysis, the NRC staff finds that the licensee demonstrated that complying with the specified requirement would result in a hardship or unusual difficulty. The NRC staff also finds that the licensee's proposed alternative will provide reasonable assurance of structural integrity and leak tightness of the subject components for the time period of the proposed alternative. The NRC staff therefore finds that complying with the specified requirement would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety.

4.0 CONCLUSION

As set forth in the aforementioned evaluation, the NRC staff determines that the licensee's proposed alternative – Relief Request No. 12 – provides reasonable assurance of structural integrity and leak tightness of the subject components, and that complying with the specified requirement would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety. 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)(ii) and therefore authorizes use of the proposed alternative for the remainder of the fourth 10-year ISI interval of Turkey Point 3, which will end on February 21, 2014, and of Turkey Point 4, which will end on April 14, 2014. The licensee may invoke the provision of the ASME Code, Section XI, Paragraph IWA-2430, which allows the licensee to extend the fourth 10-year ISI intervals by 1 year.

All other ASME Code, Section XI, requirements for which relief was not specifically requested and authorized herein by the NRC staff remain applicable, including the third party review by the Authorized Nuclear Inservice Inspector.

Attachment: Affected Pressure Retaining Components

Principal Contributor: Jay Wallace

Date: January 14, 2014

Turkey Point 3 Affected Class 1 Pressure Retaining Components

Affected Line or Component	Code Class	Pipe Diameter	Pipe Schedule	Approx Length	Exam Category	Drawing No.	Boundary Exception(s)
Drain line below PZR safety valve RV-3-551A (pipe piece between 3-545 and 3-545A)	1	3/4 in.	A376 TP316 SMLS Sch. 160	≤ 1 ft.	B-P	5613-M-3041 Sh. 2	Valve 3-545 remains closed to avoid pressurizing downstream Class 1 pipe piece and valve 3-545A
Drain line below PZR safety valve RV-3-551B (pipe piece between 3-546 and 3-546A and 3-585)	1	3/4 in.	A376 TP316 SMLS Sch. 160	≤ 2 ft.	B-P	5613-M-3041 Sh. 2	Valve 3-546 remains closed to avoid pressurizing downstream Class 1 pipe piece and valves 3-546A and 3-585
Drain line below PRZ safety valve RV-3-551C (pipe piece between 3-547and 3-547A)	1	3/4 in.	A376 TP316 SMLS Sch. 160	≤ 1 ft.	B-P	5613-M-3041 Sh. 2	Valve 3-547 remains closed to avoid pressurizing downstream Class 1 pipe piece and valve 3-547A
RCS loop intermediate loop "A" drain valve, liquid waste disposal piping, and leak-off valve	1	2 in.	A376 TP316 SMLS Sch. 160	≤1 ft.	B-P	5613-M-3041 Sh. 1	Valve 3-508A remains closed to avoid pressurizing downstream Class 1 piping and valves 3-508B and 3-542
		3/4 in.	A376 TP316 SMLS Sch. 160	28 ft.			
RCS loop intermediate loop "B" drain valve and liquid waste disposal piping	1	2 in.	A376 TP316 SMLS Sch. 160	≤1 ft.	B-P	5613-M-3041 Sh. 1	Valve 3-515A remains closed to avoid pressurizing downstream Class 1 piping and valve 3-515B
RCS loop intermediate loop "C" drain valve and liquid waste disposal piping	1	2 in.	A376 TP316 SMLS Sch. 160	≤1 ft.	B-P	5613-M-3041 Sh. 1	Valve 3-505A remains closed to avoid pressurizing downstream Class 1 piping and valve 3-505B
RCP "A" seal injection drain valve and blind flange	1	3/4 in.	A376 TP316 SMLS Sch. 160	≤ 1 ft.	B-P	5613-M-3047 Sh. 3	Valve 3-300A remains closed to avoid pressurizing downstream pipe piece and flange
RCP "A" seal water bypass vent valve and blind flange	1	3/4 in.	A376 TP316 SMLS Sch. 160	≤ 1 ft.	B-P	5613-M-3047 Sh. 3	Valve 3-300C remains closed to avoid pressurizing downstream pipe piece and flange

Affected Line or Component	Code Class	Pipe Diameter	Pipe Schedule	Approx Length	Exam Category	Drawing No.	Boundary Exception(s)
RCP "B" seal injection drain valve and cap	1	3/4 in.	A376 TP316 SMLS Sch. 160	≤ 1 ft.	B-P	5613-M-3047 Sh. 3	Valve 3-300D remains closed to avoid pressurizing downstream pipe piece and cap
RCP "B" seal water bypass Vent valve and blind flange	1	3/4 in.	A376 TP316 SMLS Sch. 160	≤ 1 ft.	B-P	5613-M-3047 Sh. 3	Valve 3-300F remains closed to avoid pressurizing downstream pipe piece and flange
RCP "C" seal injection drain valve and cap	1	3/4 in.	A376 TP316 SMLS Sch. 160	≤ 1 ft.	B-P	5613-M-3047 Sh. 3	Valve 3-300G remains closed to avoid pressurizing downstream pipe piece and cap
RCP "C" seal water bypass Vent valve and blind flange.	1	3/4 in.	A376 TP316 SMLS Sch. 160	≤ 1 ft.	B-P	5613-M-3047 Sh. 3	Valve 3-300J remains closed to avoid pressurizing downstream pipe piece and flange
Auxiliary spray line vent valve and upstream piping	1	2 in.	A376 TP316 SMLS Sch. 160	139 ft.	B-P	5613-M-3047 Sh. 2	Valve CV-3-311 remains closed to avoid pressurizing downstream piping up to check valve 3-313 and vent pipe and vent valve 3-120J
		3/4 in.	A376 TP316 SMLS Sch. 160	≤ 1 ft.			
Residual heat removal motor-operated valve MOV-3-750 and common suction piping	1	14 in.	A376 TP316 SMLS Sch. 140	26 ft.	B-P	5613-M-3050 Sh. 1	Valve MOV-3-750 to remain closed to avoid pressuring downstream piping and valves, MOV-3-751, 3-750B, 3-750C and 3-750D
		3/4 in. 1/2 in.	A376 TP316 SMLS Sch. 160	3 ft.			
Downstream piping of CV-3-310B	1	3 in.	A376 TP316 SMLS Sch. 160	45 ft.	B-P	5613-M-3047 Sh. 2	Valve CV-3-310B to remain closed to avoid pressurizing downstream piping up to check valve 3-312B

Attachment

Affected Line or Component	Code Class	Pipe Diameter	Pipe Schedule	Approx Length	Exam Category	Drawing No	Boundary Exception(s)
Safety Injection check valves 3-874A, 3-874B and upstream piping	1	2 in.	A376 TP316 SMLS Sch. 160	222 ft.	B-P	5613-M-3062 Sh. 1	Check valves 3-874A and 3-874B to remain closed to avoid disassembly or other temporary configurations required to achieve test pressures at upstream piping and valves MOV-3-866A and B, 3-941C and D, and 3-957
		3/4 in.	A376 TP316 SMLS Sch. 160	≤1 ft.			
Pressurizer Spray line drain valve and cap	1	3/4 in.	A376 TP316 SMLS Sch. 160	≤1 ft.	B-P	5613-M-3041 Sh. 2	Valve 3-568 remains closed to avoid pressurizing downstream pipe piece and cap
Pressurizer Spray line drain valve and cap	1	3/4 in.	A376 TP316 SMLS Sch. 160	≤1 ft.	B-P	5613-M-3041 Sh. 2	Valve 3-569 remains closed to avoid pressurizing downstream pipe piece and cap
Regenerative Heat Exchanger outlet drain line and cap	1	3/4 in.	A376 TP316 SMLS Sch. 160	≤ 1 ft.	B-P	5613-M-3047 Sh. 1	Valve 3-201A remains closed to avoid pressurizing downstream pipe piece and cap

Turkey Point 4 Affected Class 1 Pressure Retaining Components

Affected Line or Component	Code Class	Pipe Diameter	Pipe Schedule	Approx Length	Exam Category	Drawing No	Boundary Exception(s)
Drain line below PZR safety valve RV-4-551A (pipe piece between 4-545 and 4-545A)	1	3/4 in.	A376 TP316 SMLS Sch. 160	≤ 1 ft.	B-P	5614-M-3041 Sh. 2	Valve 4-545 remains closed to avoid pressurizing downstream Class 1 pipe piece and valve 4-545A
Drain line below PZR safety valve RV-4-551B (pipe piece between 4-546, 4-546A, and 4-585)	1	3/4 in.	A376 TP316 SMLS Sch. 160	≤ 2 ft.	B-P	5614-M-3041 Sh. 2	Valve 4-546 remains closed to avoid pressurizing downstream Class 1 pipe piece and valves 4-546A and 4-585
Drain line below PRZ safety valve RV-4-551C (pipe piece between 4-547and 4-547A)	1	3/4 in.	A376 TP316 SMLS Sch. 160	≤ 1 ft.	B-P	5614-M-3041 Sh. 2	Valve 4-547 remains closed to avoid pressurizing downstream Class 1 pipe piece and valve 4-547A
RCS loop intermediate loop "A" drain valve, liquid waste disposal piping, and leak-off valve	1	2 in.	A376 TP316 SMLS Sch. 160	≤ 1 ft.	B-P	5614-M-3041 Sh. 1	Valve 4-508A remains closed to avoid pressurizing downstream Class 1 piping and valves 4-508B and 4-542
		3/4 in.	A376 TP316 SMLS Sch. 160	28 ft.			
RCS loop intermediate loop "B" drain valve and liquid waste disposal piping	1	2 in.	A376 TP316 SMLS Sch. 160	≤ 1 ft.	B-P	5614-M-3041 Sh. 1	Valve 4-515A remains closed to avoid pressurizing downstream Class 1 piping and valve 4-515B
RCS loop intermediate loop "C" drain valve and liquid waste disposal piping	1	2 in.	A376 TP316 SMLS Sch. 160	≤ 1 ft.	B-P	5614-M-3041 Sh. 1	Valve 4-505A remains closed to avoid pressurizing downstream Class 1 piping and valve 4-505B
RCP "A" seal injection drain valve and blind flange	1	3/4 in.	A376 TP316 SMLS Sch. 160	≤ 1 ft.	B-P	5614-M-3047 Sh. 3	Valve 4-300A remains closed to avoid pressurizing downstream pipe piece and flange

Affected Line or Component	Code Class	Pipe Diameter	Pipe Schedule	Approx Length	Exam Category	Drawing No	Boundary Exception(s)
RCP "A" seal water bypass vent valve and blind flange	1	3/4 in.	A376 TP316 SMLS Sch. 160	≤ 1 ft.	B-P	5614-M-3047 Sh. 3	Valve 4-300C remains closed to avoid pressurizing downstream pipe piece and flange
RCP "B" seal injection drain valve and cap	1	3/4 in.	A376 TP316 SMLS Sch. 160	≤ 1 ft.	B-P	5614-M-3047 Sh. 3	Valve 4-300D remains closed to avoid pressurizing downstream pipe piece and cap
RCP "B" seal water bypass Vent valve and blind flange.	1	3/4 in.	A376 TP316 SMLS Sch. 160	≤ 1 ft.	B-P	5614-M-3047 Sh. 3	Valve 4-300F remains closed to avoid pressurizing downstream pipe piece and flange
RCP "C" seal injection drain valve and cap	1	3/4 in.	A376 TP316 SMLS Sch. 160	≤ 1 ft.	B-P	5614-M-3047 Sh. 3	Valve 4-300G remains closed to avoid pressurizing downstream pipe piece and cap
RCP "C" seal water bypass Vent valve and blind flange.	1	3/4 in.	A376 TP316 SMLS Sch. 160	≤ 1 ft.	B-P	5614-M-3047 Sh. 3	Valve 4-300J remains closed to avoid pressurizing downstream pipe piece and flange
Piping downstream of CV-4-311	1	2 in.	A376 TP316 SMLS Sch. 160	142 ft.	B-P	5614-M-3047 Sh. 2	Valve CV-4-311 remains closed to avoid pressurizing downstream piping up to check valve 4-313
Residual heat removal motor-operated valve MOV-4-750 and common suction piping	1	14 in.	A376 TP316 SMLS Sch. 140	44 ft.	B-P	5614-M-3050 Sh. 1	Valve MOV-4-750 to remain closed to avoid pressuring downstream piping and valves, MOV-4-751, 4-750A, 4-750B, 4-750C and 4-750D
		3/4 in. 1/2 in. 1 in.	A376 TP316 SMLS Sch. 160	10 ft.			
Piping downstream of CV-4-310B	1	3 in.	A376 TP316 SMLS Sch. 160	48 ft.	B-P	5614-M-3047 Sh. 2	Valve CV-4-310B to remain closed to avoid pressurizing downstream piping up to check valve 4-312B

Affected Line or Component	Code Class	Pipe Diameter	Pipe Schedule	Approx Length	Exam Category	Drawing No	Boundary Exception(s)
Safety Injection check valves 4-874A, 4-874B and upstream piping	1	2 in.	A376 TP316 SMLS Sch. 160	140 ft.	B-P	5614-M-3062 Sh. 1	Check valves 4-874A and 4-874B to remain closed to avoid disassembly or other temporary configurations required to achieve test pressures at upstream piping and valves MOV-4-866A and B, 4-941C and D, and 4-957
		3/4 in 1 in.	A376 TP316 SMLS Sch. 160	< 3 ft.			
Pressurizer Spray line drain valve and cap	1	3/4 in.	A376 TP316 SMLS Sch. 160	≤ 1 ft.	B-P	5614-M-3041 Sh. 2	Valve 4-568 remains closed to avoid pressurizing downstream pipe piece and cap
Pressurizer Spray line drain valve and cap	1	3/4 in.	A376 TP316 SMLS Sch. 160	< 1 ft.	B-P	5614-M-3041 Sh. 2	Valve 4-569 remains closed to avoid pressurizing downstream pipe piece and cap
Regenerative Heat Exchanger outlet drain line and flange	1	3/4 in.	A376 TP316 SMLS Sch. 160	≤ 1 ft.	B-P	5614-M-3047 Sh. 1	Valve 4-201A remains closed to avoid pressurizing downstream pipe piece and flange

If you have any questions regarding this issue, please contact the project manager, Ms. Audrey Klett, at (301) 415-0489 or by e-mail at Audrey.Klett@nrc.gov.

Sincerely,

/RA/

Jessie F. Quichocho, Chief
Plant Licensing Branch II-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-250 and 50-251

Enclosure:
Safety Evaluation

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