

May 20, 2015

MEMORANDUM TO: Shanna R. Helton, Chief  
Plant Licensing Branch II-2  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

FROM: Timothy R. Lupold, Chief **/RA/**  
Mechanical and Civil Engineering Branch  
Division of Engineering  
Office of Nuclear Reactor Regulation

SUBJECT: SAFETY EVALUATION INPUT RELATED TO THE LICENSE  
AMENDMENT REQUEST TO CHANGE TECHNICAL  
SPECIFICATION 6.8.4.h, "CONTAINMENT LEAKAGE RATE  
TESTING PROGRAM," FOR THE ST. LUCIE NUCLEAR PLANT,  
UNIT 1 AND UNIT 2 (TAC NOS. MF4694 AND MF4695)

By letters dated August 26, 2014 Florida Power & Light Company, the licensee, submitted a license amendment request (LAR) for the St. Lucie Nuclear Plant, Unit 1 and Unit 2. The LAR proposed to revise Technical Specification (TS) 6.8.4.h, "Containment Leakage Rate Test Program,"

The Mechanical and Civil Engineering Branch (EMCB) staff has completed its review of the subject LAR and concluded that the LAR is acceptable. The LAR changes the existing integrated leak rate test frequency, required by TS 6.8.4.h, to allow extension of the Type A test interval up to one test in 15 years on a permanent basis. The EMCB staff's safety evaluation input is enclosed. This completes EMCB's effort on TAC Nos. MF4694 and MF4695.

Enclosure:  
Safety Evaluation

CONTACT: Dan Hoang, NRR/DE/EMCB  
(301) 415-3052

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**ADAMS ACCESSION NO.: ML15120A505**

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<b>DATE</b>	05/20/2015	05/20/2015

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**SAFETY EVALUATION INPUT BY THE OFFICE OF NUCLEAR REACTOR REGULATION**  
**RELATED TO THE LICENSE AMENDMENT REQUEST FOR THE**  
**TECHNICAL SPECIFICATION CHANGE TO EXTEND**  
**THE INTEGRATED LEAK RATE TEST FREQUENCY**  
**ST. LUCIE NUCLEAR PLANT, UNIT 1 AND UNIT 2**  
**DOCKET NOS. 50-335 AND 50-389**  
**TAC NOS. MF4694 AND MF4695**

## **1.0 INTRODUCTION**

By the letter dated August 26, 2014 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML14241A496), (Reference 5.1), Florida Power & Light Company (FPL, the licensee), submitted a license amendment request (LAR) to the U.S. Nuclear Regulatory Commission (NRC). The LAR is applicable to the St. Lucie Nuclear Plant, Unit 1 and Unit 2, Technical Specification (TS) 6.8.4.h, "*Containment Leakage Rate Testing Program*," to adopt the testing frequency from topical report (TR) Nuclear Energy Institute (NEI) 94-01 (Reference 5.3), Revision 3-A, "*Industry Guideline for Implementing Performance-Based Option of 10 CFR Part 50, Appendix J*." The licensee also supplemented its original submittal via a letter dated January 14, 2015 (ADAMS Accession No ML15029A496), (Reference 5.2), in response to NRC staff requests for additional information. The proposed change allows for the extension of the Type A test interval up to one test in 15 years, based on acceptable performance history as defined in (Reference 5.4) NEI 94-01, Revision 2-A, "*Industry Guideline for Implementing Performance-Based Option of 10 CFR Part 50, Appendix J*," on a permanent basis.

## **2.0 REGULATORY EVALUATION**

The licensee requested a change to the Facility Operating Licensee for St. Lucie Unit 1 and Unit 2, in accordance with Title 10 of the *Code of Federal Regulations* (10 CFR) 50.90 "Applications for amendment of license or construction permit" and 10 CFR 50.54(o). 10 CFR 50.54(o) requires that the primary reactor containments for water cooled power reactors shall be subject to the requirements set forth in Appendix J to 10 CFR Part 50 – "Primary Reactor Containment Leakage Testing for Water-Cooled Power Reactors." Appendix J includes two options, Option A – "Prescriptive Requirements," and Option B – "Performance-Based Requirements," either of which may be chosen for meeting the requirements of Appendix J.

The testing requirements in Appendix J ensure that (a) leakage through the containments or systems and components penetrating the containments does not exceed allowable leakage rates specified in the TSs, and (b) the integrity of the containment structure is maintained during its service life. St. Lucie has voluntarily adopted and has been implementing Option B for meeting the requirements of Appendix J. Option B of Appendix J specifies the performance-based requirements and criteria for preoperational and subsequent leakage-rate testing.

These requirements are met by performance of Type A tests to measure the containment system overall integrated leakage rate; Type B pneumatic tests to detect and measure local leakage rates across pressure-retaining leakage-limiting boundaries such as penetrations; and

ENCLOSURE

Type C pneumatic tests to measure containment isolation valve leakage rates. After the preoperational tests, these tests are required to be conducted at periodic intervals based on the historical performance of the overall containment system (for Type A tests), and based on the safety significance and historical performance of each boundary and isolation valve (for Type B and C tests) to ensure integrity of the overall containment system as a barrier to fission product release. The leakage rate test results must not exceed the allowable leakage rate ( $L_a$ ) with margin, as specified in the TSs. Option B also requires that a general visual inspection of the accessible interior and exterior surfaces of the containment system for structural deterioration, which may affect the containment leak-tight integrity, must be conducted prior to each Type A test and at a periodic interval between tests based on the performance of the containment system.

Section V.B.3 of 10 CFR 50, Appendix J, Option B, requires that the regulatory guide or other implementation document used by a licensee to develop a performance-based leakage-testing program must be included, by general reference, in the plant TSs. Furthermore, the submittal for TS revisions must contain justification, including supporting analyses, if the licensee chooses to deviate from methods approved by the Commission and endorsed in a regulatory guide.

### **3.0 TECHNICAL EVALUATION**

#### **Description of the St. Lucie Containment**

The containment vessel is a right circular cylinder (approximately 2 in. thick) with a hemispherical dome (approximately 1 in. thick) and ellipsoidal bottom (approximately 2 in. thick). The containment vessel is equipped with a dome inspection walkway, access ladder, and circular crane girder with a crane rail attached to the shell of the vessel. The containment vessel is enclosed by the reinforced concrete Shield Building. An annular space is provided between the walls and domes of the containment vessel and the Shield Building in order to permit construction operations, in-service inspection, and to filter any leakage from containment during a loss of coolant accident to minimize site doses.

#### **3.1 Licensee's Proposed Changes**

In Reference 5.1, the licensee stated that St. Lucie Unit 1, TS 6.8.4.h, "*Containment Leakage Rate Testing Program*" currently states:

*"A program to implement the leakage rate testing of the containment as required by 10 CFR 50.54(o) and 10 CFR 50 Appendix J, Option B, as modified by approved exemptions. This program is in accordance with the guidelines contained in RG 1.163, "Performance-Based Containment Leak-Test Program," as modified by the following exception(s):*

- a) *Bechtel Topical Report, BN-TOP-1 or ANS 56.8-1994 (as recommended by RG 1.163) will be used for Type A testing.*
- b) *The first Type A test performed after the May 1993 Type A test shall be no later than May 2008.*

In Reference 5.1, the licensee proposed amendment would revise St. Lucie Unit 1, TS 6.8.4.h, "Containment Leakage Rate Testing Program," to state:

*"A program to implement the leakage rate testing of the containment as required by 10 CFR 50.54(o) and 10 CFR 50 Appendix J, Option B, as modified by approved exemptions. This program is in accordance with the guidelines contained in NEI 94-01, Revision 3-A, "Industry Guideline for Implementing Performance-Based Option of 10 CFR Part 50 Appendix J," except that the next Type A test performed after the December 8, 2005 Type A test shall be performed no later than December 8, 2020."*

The licensee also stated that St. Lucie Unit 2, TS 6.8.4.h, "Containment Leakage Rate Testing Program" currently states:

*"A program to implement the leakage rate testing of the containment as required by 10 CFR 50.54(o) and 10 CFR 50 Appendix J, Option B, as modified by approved exemptions. This program is in accordance with the guidelines contained in Regulatory Guide 1.163, "Performance-Based Containment Leak-Test Program," as modified by Bechtel Topical Report, BN-TOP-I or ANS 56.8-1994 (as recommended by RG 1.163) which will be used for type A testing."*

In Reference 5.1, the licensee proposed amendment would revise St. Lucie Unit 2, TS 6.8.4.h, "Containment Leakage Rate Testing Program," to state:

*"A program to implement the leakage rate testing of the containment as required by 10 CFR 50.54(o) and 10 CFR 50 Appendix J, Option B, as modified by approved exemptions. This program is in accordance with the guidelines contained in NEI 94-01, Revision 3-A, "Industry Guideline for Implementing Performance-Based Option of 10 CFR Part 50, Appendix J," except that the next Type A test performed after the December 18, 2007 Type A test shall be performed no later than December 18, 2022."*

In Reference 5.2, the licensee responses to Request for Additional Information, FPL proposes to change the reference in Unit 1 and Unit 2 TS 6.8.4.h from NEI 94-01, Revision 3-A to NEI 94-01, Revision 2-A.

#### Previous Type A Integrated Leak Rate Test (ILRT) Results

In Reference 5.1, the licensee stated that, as required by NEI 94-01, Revision 3-A Section 9.1.2, further extensions in test intervals are based upon two consecutive successful periodic Type A tests and the requirements stated in Section 9.2.3 of this guideline. There has been substantial margin to the performance limit as described in TS of La equal to 0.5 percent containment air weight per day (% wt/day). (1) The last two consecutive successful Type A tests for St. Lucie Unit 1 were 0.293%wt/day and 0.2033%wt/day for May 1993 and December 2005, respectively. (2) The last two consecutive successful Type A tests for St. Lucie Unit 2 were 0.052%wt/day and 0.1911%wt/day for June 1992 and December 2007, respectively.

Containment Examination Program

In Reference 5.1, the licensee stated that a general visual inspection of the accessible interior and exterior containment surfaces is performed prior to the Type A test (ILRT) and once per period in accordance with the IWE Program schedule. Each 10-year interval is divided into 3 periods of approximately equal duration ensuring that the requisite frequency is maintained.

The general visual inspection of the interior and exterior containment surfaces has been performed twice on each unit since the beginning of the 2<sup>nd</sup> interval in 2008. Also, during the 2<sup>nd</sup> interval, 100 percent of the moisture barrier, both interior and exterior, has been inspected per period, as required by American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code Section XI, 2001 Edition with 2003 Addenda, Subsection IWE.

The following Tables provide an approximate schedule for the general visual inspection of the accessible containment vessel surfaces assuming the Type A test frequency is 15 years.

**Table 1**  
St. Lucie Unit 1

Refueling Outage	Year	ILRT	General Visual Examination of Accessible Internal Surface	General Visual Examination of Accessible External Surface
SLI - 20	F2005	<b>X</b>	<b>X</b>	<b>X</b>
SLI - 21	S2007			
SLI - 22	F2008		<b>X</b>	<b>X</b>
SLI - 23	S2010			
SLI - 24	W2011		<b>X</b>	<b>X</b>
SLI - 25	F2013			
SLI - 26	S2015			
SLI - 27	F2016		<b>X</b>	
SLI - 28	S2018			<b>X</b>
SLI - 29	F2019	<b>X</b>	<b>X</b>	<b>X</b>
SLI - 30	S2021			

**Table 2**  
St. Lucie Unit 2

Refueling Outage	Year	ILRT	General Visual Examination of Accessible Internal Surface	General Visual Examination of Accessible External Surface
SL2 - 17	F2007	X	X	X
SL2 - 18	S2009			
SL2 - 19	S2011		X	X
SL2 - 20	F2012		X	
SL2 - 21	S2014			X
SL2 - 22	F2015		X	
SL2 - 23	S2017			X
SL2 - 24	F2018			
SL2 - 25	S2020			
SL2 - 26	F2021	X	X	X
SL2 - 27	S2023			

In Reference 5.1, the licensee also stated that the accessible interior and exterior surfaces of the concrete Shield Building continue to be inspected at a similar frequency in accordance with the Containment Leakage Rate Testing Program as required by St. Lucie TSs. This inspection is performed independently from the IWE inspections and provides another opportunity to observe any potential deficiencies of the exterior surfaces of the steel containment vessel.

Accessible Service Level I coatings inside containment are inspected each outage in accordance with St. Lucie coatings controls procedures. The containment vessel and coated appurtenances are included in the scope of this activity. The primary purpose of these inspections is to minimize the potential for clogging of the containment sump strainers; however, these inspections also serve to ensure that the containment surface coatings are maintained, and by maintaining these coatings, serves to protect the containment vessel from deterioration.

Inspection results indicate that no significant corrosion effects have been experienced involving the containment vessel and penetrations. These results demonstrate that the program continues to be an acceptable means to ensure that the containment is capable of maintaining its design basis integrity function.

#### Type B and Type C Local Leak Rate Test (LLRT) Program

In Reference 5.1, the licensee stated that the St. Lucie Appendix J, LLRT program requires testing of electrical penetrations, airlocks, hatches, flanges, and valves within the scope of the program as required by 10 CFR 50, Appendix J, Option B and TS 6.8.4.h. The program is delineated in St. Lucie procedure ADM-68.01, "Containment Leakage Rate Testing Program." When a component fails to meet its respective administrative limit, it is evaluated using the St. Lucie corrective action process and placed on a test frequency of each outage (or 24 months). To permit operation at Extended Power Uprate (EPU) conditions, the NRC issued Amendment 213 (ML12156A208), which raised the Unit I Pa value from 39.6 psig to 42.8 psig, and

Amendment 163 (ML I2235A463), which raised the Unit 2 Pa value from 41.8 psig to 43.5 psig. Currently all components within the scope of the LLRT program are being tested at a test frequency of each refueling outage. This was commenced prior to approval of EPU operation for both units to ensure compliance with the requirements for performing LLRT at or above Pa pressure and to conservatively establish a new performance history even though the new Pa values are not significantly higher.

In reference 5.3, the licensee stated that the most recent ILRTs on St. Lucie Unit 1 and Unit 2 met the requirements for Type A test (ILRT) pressure in conjunction with the current values for Pa developed from EPU and bound the revised Pa values of Unit 1 Amendment 213 and Unit 2 Amendment 163, respectively.

The licensee also stated that ANSI/ANS-56.8-1994, Section 3.2.11 Type A Test Pressure. The Type A test pressure shall not be less than 0.96 Pa nor exceed Pd. ...The test pressure shall be established relative to the external pressure of the primary containment measured at the start of the Type A test.

**Unit 1 ILRT Pressure Sequence**

Date	Time	Pressure	Description
12/07/2005	08:25	42.79 psig	Secured air compressors
12/08/2005	00:41	41.43 psig	Start Type A test
12/08/2005	08:48	41.29 psig	End Type A test
12/08/2005	13:35	41.18 psig	End verification test

Pa = 42.8 psig, 0.96Pa = 41.09 psig (Amendment 213)

**Unit 2 ILRT Pressure Sequence**

Date	Time	Pressure	Description
12/09/2007	23:30	43.11 psig	Secured air compressors
12/10/2007	13:05	42.09 psig	Start Type A test
12/10/2007	21:05	41.94 psig	End Type A test
12/11/2007	01:15	41.85 psig	End verification test

Pa = 43.48 psig, 0.96Pa = 41.74 psig (Amendment 163)

**Unit 1 - Cumulative Type B & C Test (LLRT) Totals**

Outage	Shutdown Date	Pa (psig)	As-Found Bypass (sccm)	As-Found Total (sccm)	As-Left Bypass (sccm)	As-Left Total (sccm)	Notes
SL1-25	09/2013	42.8	14,567	198,065	22,126	55,144	
SL1-24	11/2011	42.8	20,088	27,599	22,951	56,825	
SL1-23	04/2010	42.8	17,573	47,803	34,344	50,294	
SL1-22	10/2008	39.6	16,688	89,879	31,698	62,718	
SL1-21	04/2007	39.6	26,678	39,546	43,054	60,629	
SL1-20	10/2005	39.6	15,450	28,570	51,584	103,593	ILRT performed

Total (Type B & C) Limit = 544,933 sccm, Bypass Limit = 87,189 sccm



**Unit 2 - Cumulative Type B & C Test (LLRT) Totals**

Outage	Shutdown Date	Pa (psig)	As-Found Bypass (sccm)	As-Found Total (sccm)	As-Left Bypass (sccm)	As-Left Total (sccm)	Notes
SL2-21	03/2014	43.5	29,921	65,838	35,403	112,690	
SL2-20	08/2012	43.5	32,608	72,035	39,710	87,729	
SL2-19	01/2011	41.8	17,768	49,094	29,053	104,099	
SL2-18	04/2009	41.8	17,832	58,714	29,927	85,259	
SL2-17	09/2007	41.8	53,624	83,860	20,883	73,634	ILRT performed
SL2-16	04/2006	41.8	39,833	69,685	48,542	88,855	

Total (Type B & C) Limit = 585,233 sccm, Bypass Limit = 93,637 sccm

The results of the past containment leakage testing and the containment examination programs demonstrate acceptable performance of the St. Lucie containment and demonstrate that the structural and leak-tight integrity of the containment structure is adequately managed. The structural and leak-tight integrity of the St. Lucie containment will continue to be periodically monitored and managed by the containment leakage testing and containment examination programs.

**3.2 NRC Staff's Evaluation**

Limitations and Conditions

Regulatory Guide (RG) 1.163, "Performance Based Containment Leak Test Program," (September 1995) provides a method acceptable to the NRC for implementing the performance-based option (Option B) of 10 CFR 50, Appendix J. The regulatory positions stated in RG 1.163 (September 1995) as modified by NRC safety evaluations of June 25, 2008 (ADAMS Accession No. ML081140105) and June 8, 2012 (ADAMS Accession No. ML121030286) are incorporated in NEI TR NEI 94-01, Revision 3-A, "Industry Guideline for Implementing Performance-Based Option of 10 CFR Part 50, Appendix J."

The "Executive Summary" Section of Reference 5.3 notes that the TR incorporated the regulatory positions stated in Regulatory Guide 1.163 (September 1995) as modified by NRC safety evaluations of June 25, 2008 and June 8, 2012. Revision 2-A of NEI 94-01 was issued in 2008, and included provisions for extending the Integrated Leak Rate Testing (ILRT), Type A interval, to 15 years, subject to the limitations and conditions provided in the safety evaluation (SE) for Revision 2. Revision 3-A was issued in July 2012, and included guidance for extending the Type C Local Leak Rate Test (LLRT) interval to 75 months. Type C testing ensures that individual containment isolation valves are essentially leak tight. In addition, aggregate Type C leakage rates support the leakage tightness of the primary containment by minimizing potential leakage paths.

In Reference 5.6, the NRC staff determined that the NEI did not in fact incorporate the Revision 2 SE limitations and conditions into the final NEI 94-01, Revision 3-A. The limitations and conditions provided in the SE for Revision 2 also apply to Revision 3. In Reference 5.2, FPL made a change from "NEI 94-01, Revision 3-A, "Industry Guideline for Implementing Performance-Based Option of 10 CFR Part 50, Appendix J," to "NEI 94-01, Revision 2-A,

"Industry Guideline for Implementing Performance-Based Option of 10 CFR Part 50, Appendix J," and response to the limitations and conditions on the use of NEI 94-01 discussed in the June 25, 2008 NRC SE is presented in the table below for St. Lucie.

The NRC staff reviewed the information contained in Table 3 and provided an assessment for each item, as indicated:

**Table 3**

**Limitation/Condition of Section 4.1, NEI 94-01, Revision 2-A**

<b>Number</b>	<b>Description</b>	<b>St. Lucie Response</b>	<b>Staff Position</b>
<b>1</b>	For calculating the Type A leakage rate, the licensee should use the definition in the NEI TR 94-01, Revision 2, in lieu of that in ANSI/ANS-56.8-2002).	The St. Lucie Containment Leakage Rate Testing Program (ADM-68.01) utilizes the definition found in section 5.0 of NEI 94-01, Revision 3-A for calculating the Type A test leakage rate. Revision 3-A contains the same definition as Revision 2.	Adequately addressed Condition 1 based on the St. Lucie response in the LAR.
<b>2</b>	The licensee should submit a schedule of containment inspections to be performed prior to and between Type A tests.	A schedule of containment inspections is provided in Section 3.3 of this submittal	The general visual inspections requirements meet the criteria noted in NEI 94-01, Revision 2-A.
<b>3</b>	The licensee needs to address the areas of the containment structure potentially subjected to degradation.	General visual examination of accessible interior and exterior surfaces of the containment system for structural problems is conducted in accordance with (IAW) the St. Lucie In-Service Inspection Plan which implements the requirements of ASME Section XI, Subsection IWE, as required by 10 CFR 50.55a(g). Areas selected for augmented inspection IAW IWE-1240 are discussed in Section 3.4 of this submittal.	Based on NRC staff review of licensee's information provided in the LAR, the staff finds that the licensee met this limitation/condition.

<p><b>4</b></p>	<p>The licensee addresses any test and inspections performed following major modifications to the containment structure, as applicable.</p>	<p>The welded construction hatch on Unit 1 was removed for replacement of the reactor vessel head and reactor coolant system pressurizer in SL1-20 (Fall 2005). A successful Type A test was performed after restoration of the construction hatch.</p> <p>The welded construction hatch on Unit 2 was removed for replacement of the reactor vessel head and steam generators in SL2-17 (Fall 2007). A successful Type A test was subsequently performed after restoration of the construction hatch.</p>	<p>Acceptable, since the St. Lucie Unit 1 reactor vessel head and reactor coolant system pressurizer replacement in Fall 2005, and St. Lucie Unit 2 reactor vessel head and steam generator replacement in Fall 2007, Type A tests were performed successfully after restoration of the construction hatch in 2005 and 2007 for Unit 1 and Unit 2, respectively.</p>
<p><b>5</b></p>	<p>The normal Type A test interval should be less than 15 years. If a licensee has to utilize the provisions of Section 9.1 of NEI 94-01, Revision 2, related to extending the ILRT interval beyond 15 years, the licensee must demonstrate to the NRC staff that it is an unforeseen emergent condition.</p>	<p>FPL acknowledges and accepts the NRC staff position as communicated to the nuclear industry in Regulatory Issue Summary (RIS) 2008-27 dated December 8, 2008.</p>	<p>This issue was adequately addressed to the NRC based on the response in Reference 5.2.</p>
<p><b>6</b></p>	<p>For plants licensed under 10 CFR Part 52, applications requesting a permanent extension of the ILRT surveillance interval to 15 years should be deferred until after the construction and testing of CTMTs for that design have been completed and applicants have confirmed the applicability of NEI 94-01, Revision 2-A, and EPRI Report No. 1009325, Rev. 2, including the use of past containment ILRT data.</p>	<p>This is not applicable to St. Lucie Unit 1 and Unit 2. Neither unit is licensed pursuant to 10 CFR Part 52.</p>	<p>Not applicable. St. Lucie Unit 1 and Unit 2 are not licensed pursuant to 10 CFR Part 52.</p>

In response to the NRC staff request for additional information (Ref. 5.2), FPL revised the proposed technical specification change such that the containment leakage rate testing program will be in accordance with the conditions and limitations specified in NEI 94-01, Revision 2-A. Based on the above review and the revised proposed technical specification change, the NRC staff finds that the licensee has adequately addressed and satisfied the six limitations/conditions in Section 4.1 of the NRC safety evaluation report included in TR NEI 94-01, Revision 2-A. Therefore, the staff finds it acceptable for St. Lucie to adopt TR NEI 94-01, Revision 2-A, as the implementation document in its TS 6.8.4.h "Containment Leakage Rate Testing Program," for extending the ILRT (or Type A test) to 15 years on a permanent basis.

The NRC staff determined that, consistent with the guidance in NEI 94-01, Revision 2-A, the performance history for Type A tests noted above under "Previous Type A Test (ILRT) Results," and the "Containment Examination Program," supports extending the current ILRT interval to 15 years.

Based on the information provided in the Type B and Type C containment leakage rate testing program and additional information provided in this SE, the NRC staff also determined that the licensee's Containment Leakage Rate Testing (ILRT and LLRT), containment examination programs, and supplemental inspections to periodically examine, monitor, and manage age-related and environmental degradation of the St. Lucie containment support extending the ILRT (Type A) test out to a maximum of 15 years.

#### **4.0 CONCLUSION**

The NRC staff determined that the licensee provided an adequate technical justification for approval of the licensee's submittal of August 26, 2014 based on the supplemental information and the regulatory and technical evaluations noted above. The NRC staff finds that there is reasonable assurance that the structural and leak-tight integrity of the St. Lucie, primary containment will continue to be monitored and maintained with the performance-based Type A test interval extended up to one test in 15 year, without undue risk to public health and safety. The next Type A test may therefore be conducted no later than December 8, 2020 and December 18, 2022 for Unit 1 and Unit 2, respectively. Therefore, the staff concludes that (1) the proposed license amendment to change TS 6.8.4.h, to extend integrated leakage rate test frequency to 15 years for Type A and (2) the licensee can adopt NEI 94-01, Revision 2-A, as the implementation document and extend the current performance-based for Type A test interval to up to 15 years on a permanent basis, as noted in the license amendment request.

#### **5.0 REFERENCES**

- 5.1 Letter dated August 26, 2014, from Joseph Jensen, Florida Power & Light Company - St. Lucie Nuclear Plant, Units 1 and 2, to USNRC regarding the Technical Specification Change to Extend Containment Leak Rate Test Frequency, (ADAMS Accession No. ML14241A496).
- 5.2 Letter dated January 14, 2015, from Joseph Jensen, Florida Power & Light Company - St. Lucie Nuclear Plant, Units 1 and 2, "Response to Request for Additional Information regarding the Technical Specification Change to Extend Containment Leak Rate Test Frequency, (ADAMS Accession No. ML15029A496).

- 5.3 Letter dated May 14, 2015, from Christopher R. Costanzo, Site Vice President - St. Lucie Nuclear Plant, Units 1 and 2, "Response to Request for Additional Information regarding License Amendment Request to Permanently Extend the Integrated Leak Rate Test Frequency to 15 years, (ADAMS Accession No. ML15140A081).
- 5.4 Nuclear Energy Institute Topical Report NEI 94-01, Revision 3-A, "Industry Guideline for Implementing Performance-Based Option of 10 CFR Part 50, Appendix J," July 2012. (ADAMS Accession No. ML12221A202).
- 5.5 Nuclear Energy Institute Topical Report NEI 94-01, Revision 2-A, "Industry Guideline for Implementing Performance-Based Option of 10 CFR Part 50, Appendix J," October 2008. (ADAMS Accession No. ML100620847).
- 5.6 NRC Final Safety Evaluation Report, "Final Safety Evaluation for Nuclear Energy Institute (NEI) Topical Report 94-01, Revision 2, 'Industry Guideline for Implementing Performance-Based Option of 10 CFR Part 50, Appendix J,' and Electric Power Research Institute (EPRI) Report No. 1009325, Revision 2, August 2007, 'Risk Impact Assessment of Extended Integrated Leak-Rate Test Intervals," US Nuclear Regulatory Commission, Washington, DC, June 25, 2008 (ADAMS Accession No. ML081140105).
- 5.7 NRC letter dated August 20, 2013 (ADAMS Accession No. ML13192A394), to the Nuclear Energy Institute that the limitations/conditions for NEI 94-01, Revision 2A are missing in Revision 3A.