UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
SAM NUNN ATLANTA FEDERAL CENTER
61 FORSYTH STREET SW SUITE 23T85
ATLANTA, GEORGIA 30303-8931

December 5, 2002

Florida Power and Light Company
ATTN: Mr. J. A. Stall, Senior Vice President
Nuclear and Chief Nuclear Officer
P. O. Box 14000
Juno Beach, FL 33408-0420

SUBJECT: ST. LUCIE NUCLEAR PLANT - NRC INSPECTION REPORT
50-335/02-07 AND 50-389/02-07

Dear Mr. Stall:

On October 25, 2002, the NRC completed an inspection regarding your application for license renewal for your St. Lucie Nuclear Plant Units 1 and 2. The enclosed report documents the inspection findings, which were discussed on October 25, 2002, with Mr. D. Jernigan and other members of your staff in an exit meeting open for public observation at the St. Lucie site.

The purpose of this inspection was an examination of activities that support your application for a renewed license for the St. Lucie facilities. The inspection consisted of a selected examination of procedures and representative records, and interviews with personnel regarding the process of scoping and screening plant equipment to select equipment subject to an aging management review. For a sample of plant systems, inspectors performed visual examination of accessible portions of the systems to observe any effects of equipment aging.

The inspection concluded that the scoping and screening portion of your license renewal activities were conducted as described in your License Renewal Application and that documentation supporting your application is in an auditable and retrievable form. With the exception of the items identified in this report, your scoping and screening process was successful in identifying those systems, structures, and components required to be considered for aging management.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams.html (the Public Electronic Reading Room).

Should you have any questions concerning this letter, please contact us.

Sincerely,

\RA

Harold O. Christensen
Deputy Director
Division of Reactor Safety

Docket Nos. 50-335, 50-389
License Nos. DPR-67, NPF-16

Enclosure: Inspection Report 50-335/02-07, 50-389/02-07
w/attachment

cc w/encl: (See page 3)

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U. S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket Nos:	50-335, 50-389
License Nos:	DPR-67, NPF-16
Report No:	50-335/02-07, 50-389/02-07
Licensee:	Florida Power and Light Company (FPL)
Facility:	St. Lucie Nuclear Plant, Units 1 & 2
Location:	6351 South Ocean Drive Jensen Beach, FL 34957
Dates:	October 21 - 25, 2002
Inspectors:	R. Moore, Reactor Inspector M. Scott, Reactor Inspector K. Van Doorn, Reactor Inspector S. Vias, Reactor Inspector H. Wang, Operations Engineer, NRR
Approved by:	Caudle Julian Team Leader Division of Reactor Safety

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SUMMARY OF FINDINGS

IR 05000335-02-07, IR 05000389-02-07; 10/21-25 /2002; Florida Power and Light Company, St. Lucie Nuclear Plant, Units 1 & 2. License Renewal Inspection Program, Scoping and Screening.

This inspection of License Renewal (LR) activities was performed by four regional office engineering inspectors, and one staff member from the office of Nuclear Reactor Regulation. The inspection program followed was NRC Manual Chapter 2516 and NRC Inspection Procedure 71002. This inspection did not identify any "findings" as defined in NRC Manual Chapter 0612.

Documentation from the Scoping and Screening process was of good quality, detailed, thorough, and understandable. Minor exceptions were the following.

The inspectors noted that the applicant had omitted an air reservoir from the detailed list of LR in-scope components in the Main Feedwater screening summary report PSL-ENG-LRSC-00-035. The applicant took prompt corrective action to revise the Main Feedwater screening summary report to include this component. See paragraph II.A.24.

During the review, the inspectors found some inconsistencies in the structural screening report PSL-ENG-LRSC-00-050. Thermo-lag fire barriers were listed in five table entries as not being in scope when they should have been. The applicant made prompt changes to correct these inconsistencies. See paragraph II.C.5.

NRC inspectors examined a substantial portion of plant safety related equipment. The NRC's overall conclusion was the material condition of the plant was being adequately maintained.

Attachment 1 of this report lists the applicant personnel contacted and the documents reviewed. Attachment 2 lists the plant systems selected for inspection. A list of acronyms used in this report is provided in Attachment 3.

Report Details

I. Inspection Scope

This inspection was conducted by NRC Region II inspectors and members of the NRR staff to interview applicant personnel and to examine a sample of documentation which supports the license renewal application (LRA). This inspection reviewed the results of the applicant's scoping of plant systems and screening of components within those systems to identify the list of components that need evaluation for aging management. The team selected a sample of plant systems, structures, and components (SSC) from the LRA scoping results to verify the adequacy of the applicant's scoping and screening documentation and implementation activities. For the selected in-scope systems/structures, the associated boundary drawings, and the active/passive and short/long lived determinations of the selected SSCs were reviewed to confirm the accuracy of the applicant's results. In addition to the in-scope systems and structures, some systems that the applicant had determined not to be in scope for license renewal were selected for inspection. The team reviewed supporting documentation and interviewed applicant personnel to confirm the accuracy of the LRA conclusions. The SSCs selected for review during this inspection are listed in Attachment 2 to this report. For a sample of plant systems, inspectors performed visual examination of accessible portions of the systems to observe any effects of equipment aging.

II. Findings

A. Evaluation of Scoping and Screening of Mechanical Systems

The inspectors evaluated the applicant's scoping and screening process for mechanical components by reviewing a number of plant systems that the applicant determined to be within the scope of license renewal. The applicant performed scoping and screening in two phases. The first phase (plant level scoping) was performed by listing all plant systems and structures and identifying those that met one or more of the criteria of 10 CFR 54.4 for being in the scope of license renewal (LR). The second phase (screening), to determine which components required aging management, consisted of: (1) for systems considered in-scope, identifying intended functions of the system required to meet a criteria of 10CFR 54.4, (2) developing boundary drawings for each in-scope system identifying the portions of the system and the passive components required to perform the intended functions, and (3) identifying which of the required components were long-lived. Scoping and screening results were documented in applicant's scoping reports and License Renewal Screening Results Summary Reports for each system.

The inspectors reviewed the applicant's methodology for inclusion of non-safety-related (NSR) mechanical systems/components in scope which could affect safety-related (SR) systems. The applicant described their approach in a letter, L-2002-139, Response to NRC Request for Additional Information, dated September 26, 2002. Essentially, for high and moderate energy piping, the applicant considered the affects of leakage, spray and physical interactions such as falling, pipe whip, and jet impingement. For low energy piping, spray and leakage were considered. Failure of air/gas systems was not considered credible. The applicant determined all areas where NSR and SR systems were located together, conducted reviews of layout

drawings and piping detail drawings, and conducted walkdowns of areas to confirm locations and portions of systems which needed to be added to the LR scope. Some areas did not require additional portions of systems to be added to the scope. For example, in containment, all high/moderate energy piping was designed as SR and equipment is designed to be protected from leakage and spray. In some areas, the applicant's systems are in an outdoor atmosphere and equipment such as electrical enclosures are designed to withstand leakage and spray. The inspectors reviewed the applicant's engineering evaluation, reviewed documentation of the portions of systems added to LR scope, reviewed selected layout markup drawings, discussed the process with responsible personnel, and walked down areas of the plant which did not contain additional in scope systems and areas where some additional systems were added. These areas included Emergency Diesel Generator (EDG) rooms, the intake structure, the AB switchgear rooms, the Unit 2 mechanical penetration room, the Reactor Auxiliary Building (RAB) -.5 elevation hallway, Safety Injection System (SI) and Containment Spray System (CS) areas in the RAB, and the Fuel Handling Buildings. The applicant's program for identifying systems to be added to the LR scope for potential interactions of NSR with SR equipment was thorough and the inspectors did not identify additional equipment which should be in scope. Additional walkdowns are also planned during an upcoming inspection.

The following systems/structures were reviewed:

1. Reactor Coolant System (RCS)

The RCS consists of systems and components designed to contain and support the nuclear fuel, contain the reactor coolant, and transfer the heat from the reactor to the steam and power conversion system. For each unit, the system consists of four heat transfer loops connected in parallel to the reactor vessel (RV). Each loop is connected to one of two steam generators, and contains a pump, loop piping, and instrumentation. Piping connections are provided in the RCS piping for auxiliary systems, such as safety injection (SI) and chemical and volume control (CVCS). For licensee renewal, the applicant included the following components in the LRA for the RCS: reactor coolant loop pumps, piping, and components; presssurizer; RV (including the pressure boundary of the control element drive mechanisms); RV internals; and steam generators. All of the major passive components and associated piping, including instrumentation piping were considered in scope by the applicant. The inspectors reviewed the Updated Final Safety Analysis Report (UFSAR), LR boundary drawings, selected steam generator drawings, and scoping and screening documents for the system. The inspectors concluded that the applicant had appropriately scoped and screened this system and identified the components and their functions that were subject to aging management consistent with the St. Lucie LRA and the rule.

2. Chemical and Volume Control System (CVCS)

The CVCS consists of components and systems required to provide a continuous feed and bleed for the RCS; maintain proper water inventory, chemistry, and purity in the RCS, including makeup for leakage; adjust concentration of boron for reactivity control; inject concentrated boric acid upon a safety injection; provide seal water for RCS pump shaft seals; provide auxiliary pressurizer spray; and provide an alternate charging path to the RCS. The system contains piping and valves and the following major components: boric acid makeup tanks, demineralizers, a volume control tank, boric acid makeup pumps, three charging pumps, and letdown and regenerative heat exchangers. The applicant considered all of the major

components and essentially all of the associated SR piping, including instrumentation piping, in scope for license renewal. The inspectors reviewed the UFSAR, LR boundary drawings, and scoping and screening documents for the system. The inspectors concluded that the applicant had appropriately scoped and screened this system and identified the components and their functions that were subject to aging management consistent with the St. Lucie LRA and the rule.

3. Containment Spray System (CS)

The CS functions to remove sufficient heat to maintain the containments below their design pressure and temperature limits following design basis events. In addition, chemicals are injected into the suction lines to control PH in the containment sump and for iodine absorption. The systems consists of two pumps that take suction from the refueling water tank (RWT) and spray water from nozzles located near the top of the containment. When the RWT is empty, the pump suction is switched to the containment sump and the shutdown cooling heat exchangers are used to remove heat. Unit 1 has a sodium hydroxide chemical addition tank. Unit 2 has hydrazine pumps and a hydrazine storage tank. Unit 2 also has trisodium phosphate dodecahydrate stainless steel mesh baskets near the containment sump for PH control which are screened with civil/structural components. The applicant included all of the safety-related portion of the system in scope for LR. The inspectors reviewed the system scoping and screening documents, LRA boundary drawings, and the UFSAR, and walked down portions of the system. The inspectors concluded that the applicant had appropriately scoped and screened this system and identified the components and their functions that were subject to aging management consistent with the LRA and the rule.

4. Safety Injection System (SI)

The safety injection system provides emergency core cooling and reactivity control during and following design basis accidents. The SI contains both high pressure and low pressure portions. Portions of the SI are also used for shutdown cooling and containment spray cooling. The system includes two high pressure and two low pressure pumps, heat exchangers, safety injection tanks, and associated valves, piping and components. The applicant included all of the SR portion of the system in scope except a section of the high pressure portion which is abandoned in place. The inspectors reviewed the system scoping and screening documents, reviewed LRA boundary drawings, reviewed the UFSAR and performed field walkdowns of the accessible portions of the system. The inspectors concluded that the applicant had appropriately scoped and screened this system and identified the components and their functions that were subject to aging management consistent with the LRA and the rule.

5. Instrument Air System (IA)

The IA system provides a dry, oil-free source of air for instrumentation, controls, and pneumatic valves. The system contains four compressors for each Unit and associated valves, instruments, piping, orifices, tubing, fittings, receivers, accumulators, filters, strainers, and heat exchangers. The applicant considered the SR portions of IA and portions which support station blackout (SBO) and fire events in scope. Differences in original design commitments resulted in two of four compressors in Unit 1 being in scope and all four Unit 2 compressors in scope. The applicant screened the Service Air System with IA and considered portions associated with containment penetrations in scope. The applicant also screened the Bulk Gas Systems with IA

and considered a portion of the hydrogen supply line to the RAB for Unit 2 in scope. The inspectors reviewed the UFSAR, LR boundary drawings, and scoping and screening documents for IA. The inspectors concluded that the applicant had appropriately scoped and screened this system and identified the components and their functions that were subject to aging management consistent with the LRA and the rule.

6. Primary Makeup Water

This system functions to provide treated, demineralized water for makeup to various systems throughout the plant. The system contains tanks, pumps, valves, piping, and associated components. The applicant considered SR portions of the system, although the system does not perform any safety related functions, and portions whose failure could affect SR equipment to be in scope. Also, for Unit 2, portions which were part of environmentally qualified equipment and portions which supported response to fire events were considered in scope. The inspectors reviewed LR boundary drawings, a plant fire fighting procedure, plant drawings, the UFSAR, and scoping and screening documents for the system. The inspectors concluded that the applicant had appropriately scoped and screened this system and identified the components and their functions that were subject to aging management consistent withe LRA and the rule.

7. Extraction Steam

This system functions to extract steam from the main turbine for heating of main feedwater. No SR functions are performed by this system. The applicant concluded that this system was in scope for LR. The inspectors reviewed the UFSAR and plant drawings for the system. The inspectors found the applicant's conclusion acceptable.

8. Containment Airborne Radioactivity Removal System (Unit 1 only)

This system contains two units of fans and filters which function to remove airborne radioactivity in particulate and iodine form in containment. The system does not perform a safety related function. The applicant concluded that this system was not in scope for LR. The inspectors reviewed the UFSAR and plant drawings for the system. The inspectors found the applicant's conclusion acceptable.

9. Component Cooling Water System (CCW)

The CCW system is a closed loop cooling water system that provides a heat sink for safety-related and non-safety-related components during normal and emergency operation. Some of the more important cooling loads are: the shutdown cooling heat exchangers; safety-related pump seal and bearing coolers; control room cooling units; the spent fuel pit heat exchanger; and the emergency containment coolers. Typical loads are described in Table 9.2-5 of the Unit 1 UFSAR. Heat from these systems and components is transferred to the intake cooling water (ICW) system at the CCW heat exchangers' interface. The major components included are three CCW pumps, two CCW heat exchangers, a CCW surge tank, two redundant coolant loops, and associated piping, valves and instrumentation. The inspectors reviewed the UFSAR, LR boundary drawings, and scoping and screening documents for the system. The applicant considered most of the CCW system in LR scope, but did exclude several non-safety related components such as the chemical addition tank and the non-essential header for the non-safety

loads. The inspector did not consider the omissions a problem; the non safety subsections are automatically isolated or can be isolated from the remainder of the system in emergency conditions. An inspector performed a field walkdown of accessible portions of the system and found it to be in good condition. The inspectors found that the applicant had performed scoping and screening for this system in accordance with the methodology described in the St. Lucie LRA and the rule.

10. Containment Isolation

Containment isolation is an engineered safety feature that provides for the automatic closure of containment penetrations upon accident signal to prevent leakage of radioactive material to the environment. Containment isolation is described in UFSAR section 6 and had been placed in LRA scope. UFSAR Tables 6.2-16 and 6.2-52 (Unit 1 and 2, respectively) list the mechanical penetrations. The electrical penetrations are addressed under separate LRA sections (2.4 and 2.5 instead of the mechanical section 2.3.2.3) and are also in scope. The inspectors walked down several of the penetration areas finding them in adequate condition. The inspectors concluded that the applicant had appropriately scoped and screened these systems and identified the mechanical components and their functions that were subject to aging management consistent with the LRA and the rule.

11. Intake Cooling Water System (ICW)

The ICW system provides cooling water to remove heat from the CCW system, steam generator open blowdown (SGOBD), and the Turbine Cooling Water (TCW) system. The system for each unit consists of three pumps, two redundant piping headers, and associated valves and instrumentation. Flow from the ICW enters the tubes of the CCW and non-safety heat exchangers. ICW piping to the non-safety TCW and SGOBD exchangers is not in scope and is automatically isolated by valves under various emergency conditions. The ICW pumps take suction from the salt water of the unit common intake canal at the combined intake structure for ICW and Circulating Cooling Water (main turbine exhaust steam cooling). After removing heat at the heat exchangers, the flow is returned to a common discharge canal. The inspectors reviewed the UFSAR Section 9.2.1; LR boundary drawings; and scoping and screening documents for the ICW system. The inspectors also walked down portions of the system on both units finding them in generally adequate condition. Large segments of the ICW piping are beneath ground and subject to routine internal inspection (see cathodic protection discussion). The applicant concluded that the portions of the system, which assure cooling water to the CCW system were in scope for LR. The inspectors concluded that the applicant had performed scoping and screening for the ICW system in accordance with the methodology described in the St. Lucie LRA and the rule.

12. Spent Fuel Pool Cooling System (SFPC)

The SFPC system removes stored spent fuel decay heat from the spent fuel pool and filters and demineralizes the water in the pool. Each unit has a spent fuel pool and SFPC system which consists of two recirculation pumps, a purification pump, a pool, a pool liner, a skimmer, purification filter, ion exchanger, two strainers, one (or two as in the case of Unit 2) heat exchanger, and associated piping, valves, and instrumentation. The inspectors reviewed the UFSAR, Section 9.1; LR boundary drawings; and scoping and screening documents for the SFPC system. The recirculation pumps, heat exchangers, pool, associated recirculation piping,

and associated instrumentation were in scope. The inspectors performed a walkdown of the associated structures and components finding them in adequate condition. The inspectors concluded that the applicant had performed scoping and screening for the SFPC system in accordance with the methodology described in the St. Lucie LRA and the rule.

13. Cathodic Protection (CP)

The CP schemes for the units were not placed in scope by the applicant. This excluded the electrical ground mat system, which is in scope. The basis for this decision resides in the applicant's responses to NRC Requests for Additional Information (RAIs) in FPL letters L-2002-157 and L-2002-166 referenced in this report. The 157 letter text reads in part:

> NRC Question
>
> "Referring to Section 3.5.2.2.2 of the LRA, discuss St. Lucie's operating experience regarding the effectiveness of its application of the impressed current cathodic protection system to prevent the corrosion of carbon steel in fluid structural components that are exposed to raw water. Is the impressed current cathodic protection system used for items other than the sheet piling? If yes, briefly discuss the operating experience with respect to the effectiveness of these applications.
>
> FPL Response
>
> Inspection of the accessible portions of the sheet piling revealed no significant loss of material. The below groundwater portions of the sheet piling are not accessible. However, since bare steel within the submerged and subsoil zones has corrosion rates that are similar to, or lower than, corrosion rates for atmospheric conditions, the underground portions of the sheet piling are considered to be in similar condition.
>
> The impressed current cathodic protection systems that protect the discharge canal nose sheet piling and the ultimate heat sink dam sheet piling do not protect any other items. There are additional impressed current cathodic protection systems for other components and structures (e.g., barge slip, condenser water boxes, turbine cooling water heat exchangers, etc.). Based on St. Lucie plant-specific operating experience, these systems have proven to be effective in providing corrosion protection."

As clarified in FPL Response to RAI B3.2.14-2 (see FPL letter L-2002-166):

> "As described in LRA Appendix B, Section 3.2.14 (page B-58), the Systems and Structures Monitoring Program (SSMP) employs the visual inspection method. Structures and structural commodities are visually inspected on an area basis, and system commodities and components are visually inspected on a system basis. Conditions documented and evaluated via the Corrective Action Program may employ other methods, such as volumetric examination and computed radiography, to determine the extent of degradation. SSMP will be enhanced to include monitoring of interior surfaces."

These positions that the CP system does not need to be in LR scope have been accepted by the NRC in this case and for Turkey Point LRA. The inspectors will review preventive maintenance and surveillance programs (section 3.2.11 in the LRA) and SSMP implementation during the next

inspection period. The inspectors concluded that the applicant had performed scoping and screening for the CP systems in accordance with the methodology described in the St. Lucie LRA and the rule.

14. Turbine Cooling Water (TCW), Unit 1 Only

TCW is a non-safety related closed-loop system used to remove heat from the main turbine and other components in the secondary, including the instrument air (IA) compressors. TCW is discussed in Section 9.2.4 of the UFSAR. TCW components associated with IA on Unit 1 have been addressed in the LRA. Unit 2 IA is not credited in station blackout (SBO) scenarios as it is on Unit 1. Specifically, the Unit 1 atmospheric dump valves (ADV) are air operated and to operate in a SBO event require IA compressors to be powered from the Unit 2 emergency diesel generators via a SBO electrical cross connect. Thus, the Unit 1 TCW manually isolated piping segment is required to be operable during an SBO event cooling the compressor(s). The ADVs on Unit 2 are DC powered. The inspectors reviewed the UFSAR, Section 6; LR boundary drawings; and scoping and screening documents for the TCW system. The inspectors concluded that the applicant had performed scoping and screening for the TCW system in accordance with the methodology described in the St. Lucie LRA and the rule.

15. Containment Cooling (CC)

CC is a subsystem in the CCW flow path. The four per unit CC air to fluid heat exchangers give up containment heat to the CCW flow for removal in normal and accident conditions. All of the subsystem's components were in scope. The inspectors reviewed the UFSAR; LR boundary drawings; and scoping and screening documents for the CC system. The inspectors concluded that the applicant had performed scoping and screening for the CC system in accordance with the methodology described in the St. Lucie LRA and the rule.

16. Emergency Cooling Canal (ECC)

The safety-related ICW system normally draws salt water from the Atlantic Ocean via three large pipes that fill the intake canal. The canal water is the ultimate heat sink for the plants. Located on that same canal is an ultimate heat sink dam that separates the canal from the intercoastal waterway (a sound locally called the Indian River). For whatever reason, should the normal water flow be unavailable, two valves in the dam can be opened to provide flow from the waterway to the canal. The mechanical components of the dam are in scope. The inspectors reviewed the UFSAR Section 9.2.7; LR boundary drawings; Table 3.3-5 of the LRA and scoping and screening documents for the ECC system. The inspectors concluded that the applicant had performed scoping and screening for the ECC system in accordance with the methodology described in the St. Lucie LRA and the rule.

17. Service Water System (SW)

Service water supports Fire Protection and supplies water to the plant washdown stations, decontamination facilities, and potable water system. The SW is a pressure boundary at interface points for the FP system, its tanks contain the FP water source, and runs in areas were NSR/SR potential interaction conditions have been identified by the applicant. The inspectors walked down portions of the SW and FP systems finding them in adequate condition. The inspectors reviewed the UFSAR Section 9.5A; LR boundary drawings; Table 3.3-13 of the LRA and scoping and

screening documents for the SW system. The inspectors concluded that the applicant had performed scoping and screening for the SW system in accordance with the methodology described in the St. Lucie LRA and the rule.

18. Containment Post Accident Monitoring

This system includes the subsystems of Containment Hydrogen Monitoring, Post Accident Sampling (Unit 2 only), and Containment Atmosphere Radiation Monitoring. The mechanical components included in the LR scope for aging management review included piping, valves, flex hoses, tubing, sample vessels, and bolting. The inspectors reviewed the system scoping and screening documents, design basis information, and the applicable UFSAR sections. The inspectors concluded that the applicant had performed scoping and screening for this system in accordance with the LRA and the Rule.

19. Auxiliary Feedwater and Condensate System

This system supplies feedwater to the steam Generators when normal feedwater sources are not available. The components included in the LR scope for aging management review included the Condensate Storage Tanks (CST) as the water source, piping, valves, and pumps to provide a flow path from the CST to the Steam Generators. The inspectors reviewed the system scoping and screening documents, design basis information, LR boundary drawings, and the applicable UFSAR sections. The inspectors concluded that the applicant had performed scoping and screening for this system in accordance with the LRA and the Rule.

20. Sampling System

This system provides a means to obtain samples from the Reactor Coolant System and auxiliary Systems during all modes of operation for chemical and radiological analysis. The system components subject to aging management review included piping, tubing, valves, and bolting. The inspectors reviewed the system scoping and screening documents, design basis information, LR boundary drawings and the applicable UFSAR sections. The inspectors concluded that the applicant had performed scoping and screening for this system in accordance with the LRA and the Rule.

21. Waste Management System

This system collects, monitors, and processes potentially radioactive reactor plant wastes prior to release or removal from the plant site. This system includes three subsystems: liquid, gaseous, and solid waste management. It also include safeguards pump room drains and equipment and floor drainage. Waste Management components within the LR scope for aging management review include valves, strainers orifices, clean-out plugs, piping and fittings. The inspectors reviewed the system scoping and screening documents, design basis information, LR boundary drawings and the applicable UFSAR sections. The inspectors concluded that the applicant had performed scoping and screening for this system in accordance with the LRA and the Rule.

22. Ventilation (HVAC-Plumbing and Draining Leak Detection System)

Ventilation provides for heating, ventilation and air conditioning to various buildings and rooms/areas throughout the plant. Ventilation includes the following subsystems: Control Room

Air Conditioning, Emergency Core Cooling Systems Area Ventilation, Fuel handling building Ventilation (Unit 2 only), Intake Structure Ventilation (Unit 2 only), Miscellaneous Ventilation (Unit 1 only), Reactor Auxiliary Building Electrical and Battery room ventilation, Reactor Auxiliary Building Main Supply and Exhaust, and Shield Building Ventilation. Ventilation mechanical components identified in the LR scope for aging management review include valves, filter housings, heat exchangers, flexible connections, ducts, demisters, thermowells, orifices, structural supports, tubing and piping. The inspectors reviewed the system scoping and screening documents, design basis information, LR boundary drawings and the applicable UFSAR sections. The inspectors concluded that the applicant had performed scoping and screening for this system in accordance with the LRA and the Rule.

23. Diesel Generators and Support systems

The diesel generators provide emergency AC power to the onsite electrical distribution system upon loss of normal electrical supply to assure the capability for a safe and orderly plant shutdown. The diesel generator support systems include the Air Intake and Exhaust System, Air Start System, Fuel Oil System, Lube Oil System, and the Cooling Water System. Mechanical components identified in the LR scope for aging management review include pumps, valves, heat exchangers, silencers, tanks, flame arrestors, filters, strainers, flexible hoses, expansion joints, orifices, thermowells, piping, tubing and fittings. The inspectors reviewed the system scoping and screening documents, design basis information, LR boundary drawings and the applicable UFSAR sections. The inspectors concluded that the applicant had performed scoping and screening for this system in accordance with the LRA and the Rule.

24. Main Feedwater and Steam Generator Blowdown Systems

These systems provide sufficient water flow to the steam generators to maintain an adequate heat sink for the Reactor Coolant System during normal operation, provide for Main Feedwater and Steam Generator Blowdown isolation following a postulated LOCA or steam line break event, and assist in maintaining stream generator water chemistry. The mechanical components identified in the LR scope for aging management review included hydraulic accumulators and components for the fast closure of the Main Feedwater Isolation valves, and valves, piping, tubing and fittings necessary for isolation of the Steam Generators' Main Feedwater lines and Blowdown lines. The inspectors reviewed the system scoping and screening documents, design basis information, LR boundary drawings and the applicable UFSAR sections. The LR boundary for the Steam Generator Blowdown System included normally open valves as boundary valves. The inspectors verified that station procedures provided direction to close the valves in a fire event, for which those valves were included in the LR scope. The inspectors concluded that the applicant had performed scoping and screening for this system in accordance with the LRA and the Rule. One minor exception was noted.

The inspectors noted that the applicant had omitted a mechanical passive component from the detailed list of LR in-scope components in the Main Feedwater screening summary report (PSL-ENG-LRSC-00-035). This component was an air reservoir on the pneumatic-hydraulic actuation system for fast closure of the Unit 2 Main Feedwater Isolation valves. This component was shown on Anchor/Darling Valve Co. drawing W8020821 F, Schematic for Anchor/Darling Self-Contained Hydraulic Actuator Non-Redundant, revision F. The applicant's prompt corrective action was to revise the summary report to include this component. The inspectors were shown the corrected document prior to the end of this inspection.

25. Air Blower

This system/equipment functions in conjunction with the Steam Generator Blowdown Treatment System to agitate the resin in the spent resin tank prior to transfer of resin from the tank. The system/equipment provides no safety related function, is not required to mitigate the effects of a postulated event, nor supports the regulated events included in LR Rule. The inspectors reviewed the UFSAR and Steam Generator Blowdown System drawing and concluded there was adequate basis for exclusion of this system/equipment from the LR scope.

B. Evaluation of Scoping and Screening of Electrical Systems

The inspectors observed that the scoping and screening of electrical systems employed significantly different methods than the mechanical or structural disciplines. During this inspection the inspectors reviewed an Engineering Evaluation report PSL-ENG-LRSC-00-052, Rev. 2, 8/29/02, License Renewal Screening Results for Electrical/I&C Component Commodity Groups. The procedure described how the applicant accomplished scoping and screening of electrical commodities to determine those needing an aging management review.

The method used to determine which electrical and I&C components are subject to an aging management review was organized based on component commodity groups. The primary difference in this method versus the one used for mechanical systems and structures is the order in which the component scoping and screening steps are performed. This method was selected for use with the electrical and I&C components since most electrical and I&C components are active, thus, the applicant concluded that this method provided the most efficient means for determining electrical and I&C components that require an aging management review. The method is consistent with the industry guidance documented in NEI 95-10.

Electrical/I&C component commodity groups associated with electrical, I&C, and mechanical systems within the scope of license renewal were identified. This step included a complete review of design drawings and electrical/I&C component commodity groups in the plant component database. A description and function for each of the electrical/I&C component commodity groups were identified. The electrical/I&C component commodity groups that perform an intended function without moving parts or without a change in configuration or properties [screening criterion of 10 CFR 54.21(a)(1)(i)] were identified. For the resulting passive electrical/I&C component commodity groups, component commodity groups that are not subject to replacement based on a qualified life or specified time period [screening criterion of 10 CFR 54.21(a)(1)(ii)] were identified as requiring an aging management review. Electrical and I&C component commodity groups included in the 10 CFR 50.49 Environmental Qualification Program were considered to be subject to replacement based on qualified life, and thus eliminated from the list. Next certain passive, long-lived electrical/I&C component commodity groups that do not support license renewal system intended functions were eliminated. Finally the in-scope equipment identified as requiring an aging management review were compared to the NRC's Generic Aging Lessons Learned report to ensure that differences are valid and justified. The resulting list of electrical and I&C component commodity groups subject to an aging management review was:

Cables and Connections (including insulated cables and connections, uninsulated ground conductors, splices, and terminal blocks not included in the Environmental Qualification Program.

The inspectors found the methodology and the conclusions reached by the applicant to be satisfactory.

By a letter dated April 1, 2002, the NRC issued a staff position to the NEI, which described that the offsite power system, which is used to connect the plant to the offsite power source and would be used to recover from a Station Blackout (SBO), should be included within the scope of license renewal. In RAI 2.1-2 NRC asked FPL to address the staff position and describe what additional equipment would be brought into LR scope for recovery from a SBO. In their response to the RAI, FPL contended that restoration of offsite power is not relied on to meet the requirements of the SBO Rule for St. Lucie. However, FPL performed an evaluation to determine the additional electrical and structural components that are in the scope of license renewal for restoration of offsite power at St. Lucie. For those electrical and structural components determined to be within the scope of license renewal and requiring an aging management review (AMR), an AMR evaluation was performed. The results of that evaluation were that the following passive electrical components are in the scope of LR.

DC control and power (lead sheath) cables

All Aluminum Alloy Conductor (Type AAAC) transmission conductors between the Startup Transformers and circuit breakers

High voltage insulators associated with the transmission conductors

Switchyard bus and connections between the Startup Transformers and circuit breakers

Nonsegregated-phase bus between the Startup Transformers and the non safety-related 4.16 kV switchgear

The cables were included in the AMR for non-EQ cable. The AMR evaluation concluded that the remaining electrical transmission equipment located outdoors has shown no history of deterioration and thus there are no aging effects requiring management.

In their RAI response FPL stated that consistent with the NRC position, the additional structural components included in the scope of license renewal as meeting the scoping criteria of 10 CFR 54.4(a)(3) for restoration of offsite power are as follows:

Switchyard

- Startup Transformer circuit breaker foundations
- Covered cable trenches
- Electrical component supports
- Switchyard control building
- DC electrical enclosures
- Cable trays
- Startup Transformer circuit breaker electrical enclosures
- Transmission towers

Transmission tower foundations

Turbine Buildings

Switchgear rooms

Switchgear enclosures

Switchgear supports

Nonsegregated-phase bus supports

Yard Structures

Transmission towers

Nonsegregated-phase bus supports

Nonsegregated-phase bus foundations

Startup Transformer foundations

4.16 kV Switchgear foundations

Transmission tower foundations

Electrical duct banks and manholes

An AMR evaluation of these components based on AMRs of St. Lucie structural components of the same materials exposed to the same environments yields the result that electrical components supports, DC electrical enclosures, cable trays, and transmission towers have no aging effects requiring management. The other structural components will be included in the Systems and Structures Monitoring Program aging management program.

C. Evaluation of Scoping and Screening of Structural Components

1. Component Cooling Water Areas

The Units 1&2 component cooling water areas (CCWA) house the safety related component cooling water pumps and heat exchangers , therefore, the Units 1&2 CCWA structures and structural components are within the scope of license renewal. The CCWA is designed to seismic Class 1 requirements. Table 1-1 of Attachment 1, “Component Cooling Water Areas,” Revision 1, 10/17/01 to PSL-ENG-LRSC-00-050, “St Lucie Units 1 & 2 License Renewal Screening Results - Structures and Structural Components,” Revision 3, 9/20/02 lists the screening results of the CCWA. The only component that was considered not to need aging management review is the Unit 2 CCWA trolley hoist. The inspectors agreed with this assessment.

2. Condensate Storage Tank Enclosure

The condensate storage tank (CST) enclosures of both units are cylindrical reinforced concrete structures designed to seismic class 1 requirements. They are primarily used for horizontal tornado generated missile protection of the tanks. The structures are supported on reinforced concrete mat. The top of the Unit 1 CST enclosure is open but enclosed with steel framing and grating. The top of the Unit 2 enclosure is closed with a shallow 5 inches thick precast concrete dome roof, overlaid with an additional 19 inches of reinforced concrete. All the enclosure structures and structural components are within the scope of license renewal as listed in Table 2-1 of Attachment 2, "Condensate Storage Tank Enclosure," Revision 1, 10/20/01 to PSL-ENG-LRSC-00-050. Both enclosures have 3 feet thick reinforced concrete foundation mat and 2 feet reinforced concrete walls. The steel mesh door of the Unit 2 enclosure is screened out of license renewal because it does not perform any safety related intended function(s). The door is installed to keep birds out.

In response to RAI 2.4.2.3-1, the applicant stated that concrete above groundwater and component supports are within the scope of license renewal. The staff was concerned that bolts, base mat and structural fills are not identified as in scope. The applicant responded to the inspectors that all concrete of the CST enclosure are above groundwater level and bolts are considered to be component supports. The structural fills are fills that are between the CST and the base mat enclosed by the concrete ring walls, therefore, they are inaccessible. The inspectors walked down the CST enclosure and found they are in good shape. The steel anchor bolts are tightly secured and the concrete is in good condition. Figures 2.4-17 and 2.4-18 of the Unit 1 UFSAR shows the average ground water level is about +6' and elevation of the bottom of the CST enclosure foundation is at +10', therefore, all concrete components are above the ground water table. The inspectors considered the applicant's determination acceptable.

3. Diesel Oil Equipment Enclosure

Attachment 3, "Diesel Oil Equipment Enclosure," Revision 1, 10/22/01 to PSL-ENG-LRSC-00-050 describes that the Unit 1 diesel oil transfer pumps are completely enclosed and protected by reinforced concrete walls designed to seismic class 1 requirements. The Unit 1 diesel oil storage tanks are located outdoors on concrete foundations surrounded by a 5-foot 6-inch high overflow/rupture protection reinforced concrete containment wall.

The Unit 2 diesel oil transfer pumps and diesel oil storage tanks are located within a fully enclosed reinforced concrete seismic class 1 structure. The entire enclosures of Units 1&2 are within the scope of license renewal. The screening results are listed in Table 3-1 of Attachment 3 to PSL-ENG-LRSC-00-050. The inspectors had no concerns with the results.

4. Emergency Diesel Generator Building

The emergency diesel generator (EDG) buildings of both units are seismic class 1 reinforced concrete structures, housing duplicate diesel generating units separated by reinforced concrete walls. The diesel generators are supported on reinforced concrete mats. Both EDG buildings are within the scope of license renewal.

The screening results of the EDG buildings are listed in Table 4-1 of Attachment 4, "Emergency Diesel Generator Building," Revision 1, 10/21/02 to PSL-ENG-LRSC-00-050. Except items screened in other documents and active components, all structural components are determined to need aging management review. Figures 4-1 and 4-2 of Attachment 4 show the evaluation boundaries of the EGD buildings of Units 1&2, respectively. The inspectors agreed with the applicant's results.

5. Fire Rated Assemblies

Fire rated assemblies are found throughout the plant. They include fire barriers, fire doors, fire dampers, and penetration seals. In order to ensure that safe shutdown capability is not impaired in the event of a single fire, essential components are separated by fire barriers, radiant energy shields, flame impingement shields, conduit fire wrap, and conduit plugs.

Fire doors are provide at fire area boundaries in accordance with 10 CFR 50, Appendix R requirements. Fire dampers are provided to prevent the spread of fire through HVAC penetrations. Penetration seals are provided to maintain the integrity of fire barriers at barrier penetrations. All fire rated assemblies are within the scope of license renewal.

Table 5-1 of Attachment 5, entitled "Fire Rated Assemblies," Revision 2, 2/15/02 to PSL-ENG-LRSC-00-050 lists the screening results of the fire rated assemblies. During the review, the inspectors found some inconsistencies. There are thermo-lag 330-1 and 770-1 fire barriers listed in Table 5-1 with different aging management review results. All thermo-lag barriers are in LR scope and require an aging management review. The applicant agreed with the inspectors and made prompt changes to correct these inconsistencies in Revision 4 to the document PSL-ENG-LRSC-00-050. The inspectors agreed with the corrected assessment.

6. Fuel Handling Buildings

Attachment 6, "Fuel Handling Buildings," Revision 2, 2/15/02 to PSL-ENG-LRSC-00-050 describes that the fuel handling buildings are seismic class 1 reinforced concrete structures. The structures house the spent fuel pool which is a cast-in-place steel lined reinforced concrete tank structure. The fuel handling buildings also house heating and ventilating equipment, fuel pool heat exchanger, fuel pool filters, fuel pool pumps, and fuel pool purification pumps. In addition, the fuel

handling buildings provide space for the storage of new fuel and decontamination area for spent fuel casks and other equipment. The fuel handling buildings provide support to safety related and non-safety related equipment and systems as well as protection from the environment, such as earthquake and tornado, etc. Both fuel handling buildings are within the scope of license renewal.

Section 5.0 of this attachment indicates that the Unit 1 airtight door and seal are not in scope. The screening results listed in Table 6-1 of this attachment also indicates that certain components do not require an aging management review. License renewal application Table 2.1-1 indicate that for a Unit 1 fuel handling accident, the releases are well within the 10CFR100 limits. The inspectors agreed with this assessment.

7. Fuel Handling Equipment

The fuel handling equipment is an integrated system of equipment for refueling the reactor. It provides for handling and storage of fuel assemblies from receipt of new fuel to storage of spent fuel. Major components of the system are the refueling machine, the fuel transfer equipment, the spent fuel handling machine, the new fuel elevator, and the new fuel crane.

The refueling machine moves fuel assemblies into and out of the core and between the core and the transfer equipment. The fuel transfer equipment moves the fuel between reactor containment building and the fuel handling buildings via the transfer tube. The spent fuel handling machine moves fuel between the transfer equipment, the fuel storage racks in the spent fuel pool, the spent fuel shipping cask and the new fuel elevator.

All fuel handling equipment components are evaluated as part of the containment buildings and the fuel handling buildings. Pages 2&3 of Attachment 7, “Fuel Handling Equipment,” Revision 1, 10/15/01, to PSL-ENG-LRSC-00-050 lists all the major components and concludes that the fuel handling equipment is in the scope of license renewal. The inspectors agreed with this conclusion.

8. The Unit 1 Fire House

The Unit 1 fire house is a concrete block structure with concrete foundation. The structure is located near the Unit 1 CST enclosure. The fire house is used as a storage room to store fire fighter’s equipment, such as clothing, oxygen bottles and other breathing apparatus. The inspectors walked down the structure and found it is located sufficiently far away from any safety related structures or systems and it does not perform any safety related intended functions as described in 10 CFR54.4, therefore, the inspectors agreed that this structure is not within the scope of license renewal.

9. Intake Velocity Caps

The intake velocity caps are attached to the end of the intake pipe located in the Atlantic Ocean, approximately 1200 feet from the shore. Drawing 2998-G-663-S01 shows the location and Drawing 8770-G-664-2 shows the details of the caps. The caps consist of a flat plate supported vertically by steel columns. Water flows horizontally through the spaces between the vertical columns into the intake pipe. This arrangement reduces the velocity of the intake flow to minimize fish entrapment and to avoid damaging marine life. In case the caps are damaged, cooling water can be brought in from the Indian River via the Ultimate Heat Sink Dam through the emergency cooling canal to supply cooling water to the essential systems. The inspectors agreed that the intake velocity caps are not within the scope of license renewal.

10. The Intake and Discharge Pipelines

Section 9.2.3.1 of the Unit 1 UFSAR indicates that the intake pipelines are 12 foot and 16 foot diameter prestressed concrete pipes commencing some 1200 feet offshore and are buried from the intake point for a distance of about 1600 feet to the intake canal. In case these pipelines are damaged or plugged, cooling water can be brought in through the emergency cooling water canal to the intake pumps.

The discharge pipelines are 12 foot and 16 foot ID concrete pipes connecting to the discharge canal through a outfall structure and terminated 1550 feet and 3375 feet offshore, respectively. The 12' pipe is terminated into a y-type high velocity jet discharge. The last 1600 ft of the 16' diameter discharge line is the multi-port diffuser section composed of 58 equally spaced 17-3/4 inch ports. Drawing 2998-G-663-S01 depicts the intake and discharge pipelines. In case the discharge pipes are damaged, the discharge canal is equipped with a spillway which will discharge water to a mangrove detention pond and eventually to the Atlantic Ocean.

The intake and discharge pipelines have redundant equipment to perform any intended functions, so the inspectors agreed that they are not within the scope of license renewal.

11. Intake, Discharge, and Emergency Cooling Canals

The intake canal, which takes water from the Atlantic Ocean via underground concrete water pipes, serves as the plant heat sink. In the unlikely event of blockage of the intake canal, emergency cooling water will be available from the Indian River through the emergency cooling water canal to supply cooling water to the power plant. The cooling water flows into the discharge canal and then to the Atlantic Ocean via concrete discharge pipes. The intake, discharge, and emergency cooling water canals are all within the scope of license renewal.

12. Ultimate Heat Sink Dam (Barrier Wall)

The Ultimate Heat Sink Dam, as described in Attachment 16 to PSL-ENG-LRSC-00-050, also called the Emergency Cooling Water System Barrier Wall, is a reinforced concrete buttressed retaining wall that extends across the emergency cooling water canal. The main structures of the dam consist of a concrete barrier wall, the concrete buttresses, the concrete mat foundation, and the seismic class 1 equipment room. A steel sheet piling cut-off wall is driven below the dam, for the full length of the dam, to prevent under seepage below the dam. The applicant assesses that the entire dam, including the cut-off wall are within the scope of license renewal.

The screening results, as listed in Table 16-1 0f Attachment 16, indicates that the hurricane protection piles and stop logs are not in scope. The applicant indicates that the piles are there to protect the earth bank from erosion by hurricane and wave action. The stop logs are used for maintenance of the gates. The inspectors agreed with this assessment.

13. Intake Structures

The intake structures, as described in Attachment 10, “Intake Structures,” Revision 2, 2/15/02 to PSL-ENG-LRSC-00-050 are seismic class 1 reinforced concrete structures containing the safety related intake cooling water pumps and the non safety related circulating water pumps, in addition to a variety of other components. The entire structure is within the scope of license renewal.

The intake structure screening results, as listed in Table 10-1 of this attachment, states that trash racks are not in scope. In the response to RAI 2.3.3-10, the applicant stated that “Stationary and traveling screens were determined not to be within the scope of license renewal because they do not perform or support any license renewal system intended functions that satisfy the scoping criteria of 10CFR54.4(a). These components support normal plant power operation, but their failure does not affect the safety related function of intake cooling water (ICW)..... In comparison to the circulating water pumps, the safety related ICW pumps draw a small amount of cooling water through the intake. Any significant degradation or failure of the screens during power operation would be evident and detected by plant operators far in advance of a complete failure. Even in the case of total failure, floating or heavy debris would not affect ICW pump operation due to the low velocities at the suction of the ICW pumps.”

The inspectors walked down the intake structure and found that the material condition is adequate. The inspectors noted that there is an obvious vertical crack in a concrete wall near a corner alongside a steel insert plate in a lower level of the structure. The inspectors asked the applicant if this crack had been noted before. The applicant stated that the crack had been recognized in the past and a condition report (CR) was issued to address this crack. The applicant provided the inspectors with the CR. Similarly, the inspectors noted several cracks in the concrete pedestals for the ICW pumps. The applicant produced a CR which addressed these cracks and proposed a repair plan to be implemented in the future. Inspectors will review these CRs further during a future inspection.

14. Reactor Auxiliary Buildings

Attachment 12, “Reactor Auxiliary Buildings,” Revision 2, 2/15/02 to PSL-ENG-LRSC-00-050 describes that the reactor auxiliary buildings (RAB) are seismic class 1 reinforced concrete structures with cast in place exterior walls, which are supported on a reinforced concrete mat. The intended functions are stated in Section 2.0 of this attachment and the screening results are listed in Table 12-1. The RAB houses the waste treatment facilities, engineered safety features, mechanical and electrical equipment, laboratories, offices, and the control rooms. Further, the buildings provide protection to the electrical cable and piping penetration areas of the reactor containment building. The building’s exterior walls, floor, roof, and interior partitions are designed to provide plant personnel with the necessary biological radiation shielding and to protect the equipment inside from the effects of adverse atmospheric conditions including tornados hurricanes, high winds, missiles, and external flooding. The entire building is determined to be within the scope of license renewal. The inspectors agreed with the applicant’s assessment.

15. Reactor Containment Buildings

Each of the reactor containment buildings consist of the steel containment vessel (SCV), the reactor containment shield building (RCSB), and the reactor containment internal structures. The RCSB surrounds the SCV to form a secondary containment. The major concrete components of the containment interior are the primary and secondary shield walls, the refueling cavity, the operating floor, and the enclosures around the pressurizer and the steam generators. The major steel components of the containment interior are the reactor coolant system supports, the refueling cavity liner, steel framing, miscellaneous platforms, piping, pipe supports and whip restraints, HVAC, electrical conduit and cable tray supports.

The SCV is a circular cylinder with a 2 inch thick wall, a 1 inch thick hemispherical dome, and a 2 inch thick ellipsoidal bottom. The major components of the SCV are the mechanical and electrical penetrations, air locks and hatches, and the fuel transfer tube.

The RCSB is a reinforced concrete right cylinder structure with a shallow dome roof surrounding the SCV. The cylindrical portion of the RCSB is 3 foot thick and the thickness of the dome is 2 foot and 6 inches. The RCSB and SCV are supported on a 10 foot thick circular concrete foundation mat. The entire building is assessed to be within the scope of license renewal.

The reactor containment buildings house many systems and components. Table 13-1 of attachment 13, “Reactor Containment Buildings,” Revision 2, 2/15/02 to PSL-ENG-LRSC-00-050 lists all the components evaluated under this attachment. The only components that do not require an aging management review are those that are either active or short lived. The inspectors agreed with the assessment.

16. Steam Trestle Areas

The Steam Trestle Areas (2 for each unit) consists of braced steel structure supported on a reinforced concrete foundation. Each trestle area contains safety relate SSCs from the main steam, feedwater, and auxiliary feedwater systems. The steam trestle areas are located between the reactor containment building and the turbine building. Each trestle contains a main steam line, a main steam isolation valve, main steam safety valves, a feedwater line, main feedwater isolation valve(s), atmospheric dump valve(s), and auxiliary feedwater pump(s). All trestle areas are within the scope of license renewal.

Table 14-1 of Attachment 14, "Steam Trestle Areas," Revision 1, 10/17/01 to PSL-ENG-LRSC-00-050 lists the screening results indicating that all components in the steam trestle areas are needing an aging management review except the steel sheet piling, located along the north side of the Unit 2 trestle structure. The Unit 2 sheet piling, originally provided during construction of the Unit 2 steam trestle, served to protect the Unit 1 safety related equipment. As such, the sheet piling was primarily a construction feature that currently performs no license renewal intended functions. The inspectors agreed with the assessment.

17. Turbine Building

The Turbine Buildings of both units are non seismic class 1 structures. However, they were seismically analyzed and are found to maintain their structural integrity for the seismic loading condition. The turbine buildings are essentially open steel frame structures built on reinforced concrete mat foundations. The turbine generators are supported separately on concrete pedestals. The evaluation boundary of the turbine building is the exterior walls of the building. The electrical duct banks located beneath the steam trestle areas are associated with the Yard Structures and are screened with those structures.

The Unit 2 turbine building does not contain any safety related components, but the Unit 1 turbine building does have certain safety related components associated with the main feedwater isolation valves. Table 15-1 of Attachment 15, "Turbine Buildings," Revision 3, 9/19/02 to PSL-ENG-LRSC-00-050 lists the screening results of the turbine buildings. The turbine buildings are assessed to be within the scope of license renewal.

18. Switch Yard

The Switch Yard, also called the St Lucie Substation, was originally determined to be not within the scope of license renewal. In response to RAI 2.1-2, the applicant decided to include certain electrical components located in the switch yard to satisfy the station blackout (SBO) requirements. With the inclusion of those components, the switch yard is assessed to be within the scope of license renewal.

The four bay 230kv switch yard provides switching capacity for two main generator outputs, four start-up transformers, three outgoing transmission lines, and one distribution substation. Section 2.0 of Attachment 19 to PSL-ENG-LRSC-00-050 states that the switch yard provides structural support of essential equipment required for the restoration of off-site power following a SBO event. The screening results are listed in Table 19-1 of Attachment 19 and only the components that are supporting the essential equipment needed for the restoration of off-site power during SBO are in the scope of license renewal.

The inspectors walked down the switch yard. During the tour, inspectors looked at yard drainage, yard elevation above height of plant, concrete foundations, isolation switches, ground strapping, insulators, breakers, relay house, relay batteries in the house, bus and transmission supports and fasteners. The inspectors found that the cable trenches were dry and free from moisture, the switch gear in the relay house are in good shape, and the material condition of the steel structural supports to the essential lines are rust free.

D. Evaluation of Scoping and Screening of Fire Protection Systems

The LRA states that fire Protection protects plant equipment to ensure safe plant shutdown in the event of a fire. Fire Protection consists of fire suppression water distribution and spray, reactor coolant pump oil collection, and reactor auxiliary building cable spreading room Halon (Unit 1 only). Fire rated assemblies, fire barriers, and structural components required to ensure adequate Halon concentrations (if actuated) are included in the civil/structural screening. Fire detection was included in the electrical/I&C screening.

Fire Protection components subject to an aging management review include pumps and valves (pressure boundary only), tanks, flame arrestors, sprinkler heads, nozzles, sightglasses, enclosures (reactor coolant pump oil collection), filters, vortex breakers, hydrants, flexible hoses, drip pans, orifices, piping, tubing, and fittings. The intended functions for Fire Protection components subject to an aging management review include pressure boundary integrity, throttling, fire spread prevention, filtration, vortex prevention, and spray.

The inspectors examined boundary diagrams listed in Table 2.3-3 of the LRA which show the evaluation boundaries for the portions of Fire Protection systems that the applicant concluded are within the scope of license renewal. The inspectors found no significant discrepancies in the Fire Protection boundary drawings.

E. Visual Observations of Plant Equipment in Containment (Unit 1)

On October 2-3, 2002, during the St. Lucie Unit 1 refueling outage, NRC inspectors performed walkdown inspections of accessible portions of plant systems, components, and structures inside the containment, including the free standing steel containment and shield building to observe material condition and inspect for aging conditions that might not have been recognized and

accounted for in the LRA. The observations of general material conditions included: inspection of piping components for evidence of leaks or corrosion, inspection of coatings (piping, tanks, and structural components), and inspection of electrical cable including electrical cable trays and conduits for deterioration. In general, material condition was adequate and no aging management issues were identified. The inspectors observed minor deficiencies including spots of corrosion on equipment and structures around the Quench tank and on tops of various galvanized electrical boxes, peeling paint on various structural steel and general pitting in concrete coatings. All deficiencies were previously identified by the applicant and documented in the corrective action program.

The following is a partial list of equipment observed:

Steam Generators
Reactor Coolant pumps
maintenance hatch
personnel hatch
biological shield wall
RCP oil collection tank
reactor drain tank
penetrations
regenerative heat exchanger
pressurizer, including piping and valves
instrument air receiver
instrument air compressors
instrument air dryers
electrical tunnel access pit
safety injection tanks
containment cooling units
quench tank
hydrogen recombiner
escape airlock
hydraulic power pack
construction hatch

F. Inspection items from NRR staff review

The NRR staff reviewed the St. Lucie, Units 1 and 2, license renewal application and the associated responses to requests for additional information (RAIs). The staff requested that the inspection team inspect, confirm or verify certain items that it had identified during its reviews. The following items are in response to the staff's request.

1. The inspection team was asked to provide a summary of the integrated leak rate tests (ILRTs) conducted at St. Lucie, Units 1 and 2. The inspectors reviewed six ILRT reports for Unit 1 and four ILRT reports for Unit 2. The inspectors confirmed that the reported results of the ILRTs were within the acceptance criteria. The inspectors noted that the reported containment leak rates increased due to a change in the methodology for reporting the results of the ILRTs. The reported leak rates resulting from the new methodology showed a greater variation than the leak rates previously reported. The applicant explained that the increased variation was due to the new methodology that includes the results of local leak rate tests (LLRTs) in the results of the ILRTs. On the basis of LLRT results, the licensee conducted maintenance to reduce individual component leak rates, which directly affected the ILRT results.

2. The inspection team was asked to review the potential for clogging of the recirculating sump screens, since past operating experience with clogging from peeling paint or any debris should be inspected as well as any aging management programs used to ensure effectiveness of coatings during the period of extended operation. The inspectors reviewed operating experience from the last sump surveillance that was conducted on April 23, 2002, and found it acceptable.

The inspectors reviewed maintenance procedure MSP 100.01, which provides directions for tracking and trending findings associated with peeling paint and debris in the containment. The procedure was implemented in response to Generic Letter 98-04, "Potential for Degradation of the Emergency Core Cooling System and the Containment Spray System after a Loss-of-Coolant Accident Because of Construction and Protective Coating Deficiencies and Foreign Material in Containment," and is in compliance with EPRI TR-109937 (March 1998), which is endorsed by Regulatory Guide 1.54, "Service Level I, II, and II Protective Coatings Applied to Nuclear Power Plants." The Containment Closeout Inspections and Special Provisions for Uncoated or Partially Coated Surfaces (SPEC-C-034 App B) was reviewed by the inspectors and found sufficient for ensuring the effectiveness of coatings during the period of extended operation.

3. The inspection team was asked to review the acceptance criteria established for the extent of corrosion of the containment shell. The inspectors reviewed Engineering Evaluation JPN-PSL-SEMS-92-010, revision 0, "Evaluation of Pitting On Containment Vessel Exterior at 23' Elevation, St. Lucie Unit 2." The minimum required wall thickness for the containment vessel cylindrical section is 1.918 inches in accordance with requirements stated in ASME Section III, paragraph NE-3324.3. The average wall thickness in the pitted area was 1.921 inches. Additional calculations were performed to confirm primary stresses induced by internal pressure, distributed live loads, and certain bending stresses did not need to be considered.

On the basis of the evaluation, the applicant determined that there is sufficient margin between the as-found wall thickness in the pitted location and the calculated code allowable wall thickness. The evaluation determined that the probable root cause for the localized corrosion is water entering the containment through the annulus access doors and maintenance hatch during refueling outages. To prevent further deterioration of the containment vessel, the identified pitted areas were coated. To prevent reoccurrence of this damage, a periodic inspection and maintenance scheduled was implemented. The inspectors concluded that the applicant had established an inspection procedure and acceptance criteria for evaluating corrosion of the containment shell.

4. The inspection team was asked to confirm that the applicant had properly identified the components and commodity groups associated with the condensate polisher building that should be within the scope of license renewal. The inspectors walked down the condensate polisher building and held discussions with the applicant. The condensate polisher building was built after Unit 1 was initially licensed. The purpose of the structure is to house the condensate polisher system, which is outside the scope of license renewal. In addition, the building contains lighting, domestic water, ventilation, communication, crane, and fire protection systems. The applicant identified the fire protection systems as the only equipment in the building being within the scope of license renewal in accordance with 10 CFR 55.4(a)(iii) for regulated events. The inspectors concluded that the applicant had properly identified the structures and components that are within the scope of license renewal.

5. Hatches in the floors of the Unit 1 and 2 reactor auxiliary buildings are used to move equipment and materials between floors. A 1/4 inch thick carbon steel hatch cover is installed when the hatch is not in use. The hatch cover is credited for providing fire resistance between fire areas. The inspection team was asked to evaluate whether the degradation of these 1/4 inch carbon steel hatch covers would invalidate the fire protection system exemption that relies on the hatch covers. The inspectors walked down the installation of one of the hatch covers and reviewed Table 12-1, “Screening Results for Reactor Auxiliary Building,” in Engineering Evaluation PSL-ENG-LRSC-00-050, Attachment 12. The steel hatch covers are included in the category of miscellaneous steel and are within the scope of license renewal. Table 3.5-12 on page 3.5-75 of the license renewal application indicates that the Systems and Structures Monitoring Program (SSMP) manages the aging effects associated with the miscellaneous steel commodity group. The inspectors concluded that the SSMP would adequately manage any degradation of the steel hatch covers that would invalidate the basis for the exemption.

6. The inspection team was asked to verify how the hydrogen recombiners were mounted in the containment and whether all the associated supports and housings are within scope and subject to an aging management review. The inspectors reviewed the St. Lucie Plant, Unit 1, Equipment Qualification Document Package, drawing No 8770-A-451-28.2 and the St. Lucie Plant, Unit 2, Equipment Qualification Document Package, drawing No 2998-A-451-61.0 and verified that the hydrogen recombiners were environmentally qualified by being tested as integral units. The inspectors reviewed drawings Nos. 8870-7169-R0 and 8870-G-541 and verified that the Westinghouse hydrogen recombiners are bolted to a concrete pad with no additional supports or housings. The recombiners are within the scope of license renewal and were subjected to an aging management review.

7. The inspection team was asked to verify that specific containment heating, ventilation, and air-conditioning (HVAC) components were within the scope of license renewal and were subjected to an aging management review. The inspectors reviewed Engineering Evaluation PSL-ENG-LRSC-00-048, concerning scoping and screen of containment components, and Engineering Evaluation PSL-ENG-LRAM-00-085, revision 1, concerning the aging management reviews of containment components. The inspectors verified that the blowout panels, ring duct, risers and drum type outlets are grouped in the "duct" component group. The associated aging management review identified a susceptibility of the component group to aggressive chemical attack from boric acid wastage. The inspectors confirmed that aging effects for the duct component group are managed by the boric acid wastage surveillance program.

8. The staff requested an examination of maintenance procedures and records for St. Lucie, Unit 1, component cooling water (CCW) and intake cooling water (ICW) motor operated valves and pump motors that are located outdoors to verify that the housings for the CCW and ICW valve operators and pump motors are integral components of the valves and motors. These components are considered active components and therefore are excluded from the scope of license renewal. The inspectors reviewed the St. Lucie electrical maintenance procedure for the Preventive Maintenance of Motors (EMP-100.02) and Maintenance and Repair of Limitorque valve Actuators Type SMB/SB-00 (EMP-80.08), and reviewed the St. Lucie, Unit 1, electrical maintenance procedure for the inspection of Component Cooling Water Pump Motors CCW 1A, 1B, 1C (1-EMP-14.01) and for the Overhaul of Component Cooling Water Pump Motors 1A, 1B, 1C (1-EMP-14.02) for a sampling of specific motors. The procedures indicate that the housings for the CCW and ICW valve operators and pump motors are integral components of the valves and motors and are serviced whenever the pump motors and valves are serviced. The maintenance procedures and a sample of records indicate that the pumps and valves are serviced every 18 months (1-EMP-14.01) and replaced every 36 months (1-EMP-14.02). The inspectors concluded that since the valve and pump motors are active components that are inspected and overhauled on a routine basis they are not within the scope of license renewal.

9. The inspection team was asked to confirm that the applicant had properly identified the components in the halon fire suppression system. The inspectors reviewed drawing 8770-10742 for the halon system piping; Engineering Evaluation PSL-ENG-LRSC-00-041, Attachment 5.1.6, "Screening Results for the RAB Cable Spread Room Halon System;" Engineering Evaluation PSL-ENG-LRSC-00-050, Attachment 12, "Reactor Auxiliary Buildings, Structure No. 77E;" and Engineering Evaluation PSL-ENG-LRAM-00-073 concerning the aging management reviews of halon system components. The inspectors confirmed that the halon components listed on the drawing had been evaluated as individual components or as part of component groups such as flex hoses, tanks, or component supports. These components are within the scope of license renewal and were subjected to aging management reviews.

10. The inspection team was asked to verify that the St. Lucie, Unit 1, air compressor jacket coolers are integral parts of the air compressors. The inspectors reviewed the Mechanical Maintenance Guideline No. 1-MMG-18.01, "Instrument Air Compressors 1A and 1B Disassembly, Inspection, and Reassembly," and walked down the instrument air compressors. The water jacket consists of concentric cylinders around the piston cylinder. The cooling water enters the water jacket at the top of the cylinders and exits at the bottom. The inspection procedure requires

inspection for accumulations of foreign matter or scale formations in the water jackets and water intakes. The inspectors verified that the cooling water jackets are an internal piece part of the compressors and are inspected during preventive maintenance of the compressor.

11. The inspection team was asked to verify that the components of the control room air conditioning system direct expansion refrigeration loops are part of a single integral unit. The inspectors reviewed maintenance records (PCM021-195) for the Unit 1 main control room air conditioning system direct expansion refrigerant cooling units associated with air handling units HVAC-3A, 3B, and 3C, including components located outdoors (ACC-3A, 3B, and 3C) and verified that the components in the refrigerant loop are replaced together. The inspectors also reviewed the St. Lucie Unit 1 electrical maintenance procedure for the Preventative Maintenance of the Control Room Air Conditioning Units HVA/ACC 3A, 3B, and 3C (1-EMP-25.08) and verified that the components in the refrigerant loop are serviced together whenever any of the components in the loop are serviced.

12. The inspection team was asked to verify that the insulation used in the main control room envelope or the rooms cooled by the emergency core cooling systems (ECCS) Area HVAC system was not credited for temperature maintenance in the station blackout (SBO) heatup analysis and that the insulation used for protection of electrical panels in post-accident harsh environments was not credited in any environmental qualification (EQ) analyses. The inspectors reviewed calculations PSL-0-J-M-90-0015 and PSL-1FJM-92-030. On the basis of the assumptions of calculation PSL-O-J-M-90-0015, the ECCS equipment is not required to operate and does not require ventilation since the SBO scenario assumes there were no simultaneous accidents. Calculation PSL-1FJM-92-030 indicates that there is no process equipment, i.e. piping, pumps, or heat exchangers, in the main control room envelope. The applicant did not evaluate insulation in its heat load analysis. The inspectors also reviewed the EQ analysis list 8770-A and 2998-A-450. The list did not contain any electrical panels or their insulation. The inspectors concluded that the applicant did not credit electrical panel insulation for temperature maintenance in any of its heatup analyses.

13. The inspection team was asked to confirm that failure of the main plant stack or the fuel handling building vent stack would not damage safety-related equipment. The inspectors walked down the associated roof areas and reviewed drawings of the 42 foot elevation diagram of the reactor auxiliary building. The inspectors concluded that there is no safety-related equipment on the roof of the reactor auxiliary building that would be effected by failure of the main plant stack or the fuel handling building stack. Exit Meeting Summary

The results of this inspection were discussed on October 25, 2002, with members of the FPL staff in an exit meeting open for public observation at the St. Lucie site. The applicant acknowledged the findings presented and presented no dissenting comments. During the inspection the inspectors asked the licensee whether any of the material examined during the inspection should be considered proprietary. The applicant replied that no proprietary information was reviewed during this inspection.

ATTACHMENT 1

SUPPLEMENTAL INFORMATION

PARTIAL LIST OF PERSONS CONTACTED

Applicant

T. Abbatiello License Renewal Environmental Lead

B. Beisler, License Renewal Civil Lead

R. Curtis, President IBEW LU 627

K. Getty, Sr. QA Engineer

S. Hale, FPL License Renewal Manager

D. Jernigan, Site Vice President

D. Joy, License Renewal Mechanical Lead

F. Prieto, License Renewal Electrical/I&C Lead

T. Menocal, License Renewal Technical Lead

H. Onorato, License Renewal Design Basis

R. Scott, Nuclear Communications Manager

V. Spencer, FPL Energy Encounter

NRC

K. Corp, NRR Staff Member

H. Christensen, Deputy Division Director

K. Clark, NRC Sr. Public Affairs Officer

N. Dudley, Sr. Project Manager, NRR

T. Ross, Senior Resident Inspector

Public

N. Deajon, TV News 12

E. Modzelewski, Fort Pierce Tribune

F. Porter, Photographer, TV New 12

J. Roberts, WQCS Radio

D. Sells, Florida Municipal Power Authority

LIST OF DOCUMENTS REVIEWED

Engineering Documents

PSL-ENG-LRNS-02-020, Resolution of Scoping Issue Regarding Non-Safety-Related Piping Interactions with Safety-Related Components for St. Lucie Units 1 and 2 License Renewal Application, Rev. 2

PSL-ENG-LRSP-00-030, License Renewal System/Structure Scoping Report St. Lucie Unit 1, Rev. 4

PSL-ENG-LRSP-00-031, License Renewal System/Structure Scoping Report St. Lucie Unit 2, Rev. 3

PSL-ENG-LRSC-00-050, "St Lucie Units 1&2 License Renewal Screening Results - Structures and Structural Components," Rev. 3, 9/20/02 and Rev. 4, 10/24/02

PSL-ENG-LRSC-00-052, License Renewal Screening Results for Electrical/I&C Component Commodity Groups, Rev. 2.

ENG-QI 5.3, License Renewal System/Structure Scoping Report, Rev. 4

ENG-QI 5.4, License Renewal Screening, Rev. 3,

DBD-SLI-IFLO-1, Design Basis Document for Internal Flooding Criteria, Rev. 1

PSL-0-J-M-90-0015, St. Lucie Units 1 and 2 Station Blackout Safe Shutdown Equipment, Rev. 4

Condition Report 01-1081, Containment coatings closeout inspection (required per Spec -C-034) performed on 4/20/01.

Licensing Documents

Application For Renewed Operating License - St. Lucie Nuclear Plant Units 1 & 2

FP&L Letter, L-2002-157, dated September 26, 2002

FP&L letter L-2002-166, dated September 26, 2002

St. Lucie Unit 1 Updated Final Safety Analysis Report, Amendment 18

St. Lucie Unit 2 Updated Final Safety Analysis Report, Amendment 13

PSL-ENG-LRAM-00-0084, License Renewal Aging Management Review - Diesel Generator Air System, Rev. 2

License Renewal Screening Results Summary Reports

PSL-ENG-LRSC-00-033, Reactor Coolant & Control Element Drive Mechanism Systems, Rev. 3

PSL-ENG-LRSC-00-043, Chemical and Volume Control System, Rev. 4

PSL-ENG-LRSC-00-040, Containment Spray System, Rev. 3
PSL-ENG-LRSC-00-042, Safety Injection System, Rev. 2
PSL-ENG-LRSC-00-034, Primary Makeup Water System, Rev. 4
PSL-ENG-LRSC-00-032, Intake Cooling Water, Rev. 3
PSL-ENG-LRSC-00-036, Component Cooling Water, Rev. 4
PSL-ENG-LRSC-00-041, Fire Protection System, Rev. 5
PSL-ENG-LRSC-00-046, Fuel Pool System, Rev. 2
PSL-ENG-LRSC-00-047, Instrument Air and Miscellaneous Gas Systems, Rev. 3
PSL-ENG-LRSC-00-049, Turbine Cooling Water, Rev. 1
PSL-ENG-LRSC-00-0035, Unit 1&2 - Main Feedwater System, Rev.3
PSL-ENG-LRSC-00-0045, Unit 1&2 - Diesel Generator System, Rev. 3
PSL-ENG-LRSC-00-0037, Unit 1&2 - Waste Management System, Rev 3
PSL-ENG-LRSC-00-0044, Unit 1&2 - Auxiliary Feedwater System, Rev. 3
PSL-ENG-LRSC-00-0048, Unit 1&2 - HVAC Plumbing Drainage/Leak Detection System, Rev. 3
PSL-ENG-LRSC-00-0038, Unit 1&2 - Miscellaneous Systems, Rev. 2

License Renewal Boundary Drawings

Reactor Coolant, 1/2-RCS-01 through 06, 2-RCS-07 through 09
Chemical and Volume Control, 1/2-CVCS-01 through 04
Containment Spray, 1/2-CS-01 & 02
Safety Injection, 1/2-SI-01 through 04
Instrument Air, 1/2-IA-01 through 05 and 1-IA-06
Component Cooling Water, 1/2-CCW-01 through 3
Intake Cooling Water, 1/2-ICW-01 & 02
Turbine Cooling Water, 1/2-TCW-01
Spent Fuel Pool, 1/2-SFP-01
Diesel Generators and Support Systems,1/2-EDG-01 through 07
Sampling, Containment Post Accident Monitoring, 1/2-SAMP-01 through 03
Ventilation, 1/2-HVAC-01 through 03
Waste Management, 1/2-WM-01 through 03
Main Feedwater and Steam Generator Blowdown,1/2-FW-01 through 02, 1/2-SGBD-01
Auxiliary Feedwater and Condensate, 1/2-AFW-01 through 02

Primary Water, 1/2-PW-01 and 2-PW-02

Fire Protection, 1-FP-01 through 1-FP-05, 2-FP-01and 2-FP-02

Plant Drawings

FP&L drawing 3509-G-117, Flow Diagram, Steam Generator Blowdown Miscellaneous Systems, Rev. 21

EBASCO drawing W8020821, Schematic for Anchor/Darling Self-contained Hydraulic Actuator, Non-redundant, (Main Feedwater Isolation valve) Rev. F

Terry drawing 103392D, Terry Turbine Schematic - Oil Piping, Rev.8

8770-13348, Steam Generator General Arrangement, Rev. 1

8770-13217, Feedwater Header Pipe, Rev. 0

8770-13216, Feedwater Header Pipe (Ordering), Rev. 0

8770-13281, Support Ring Slotting, Rev. 0

2998-16330, Feedwater Piping Details Steam Generator, Rev. 1

2998-G-084, Sheets 1 & 2; Flow Diagram Domestic and Make-Up Water Systems; Rev. 33

8770-G-084, Sheets 1A, 1B, & 1C; Flow Diagram Fire Water, Domestic, and Make-Up Systems; Rev. 44

8770-G-079, Sheets 3 & 4; Flow Diagram Extraction Steam System; Rev. 31

2998-G-079, Sheets 3 & 4; Flow Diagram Extraction Steam System; Rev. 20

8770-G-862, HVAC-Air Flow Diagram, Rev. 28

8770-G-879, HVAC-Control Diagrams-Sheet 2, Rev. 34

Plant Procedures

Specification No. SPEC–034, Protective Coatings for Service Level I Applications Inside Reactor Containment Building, Rev. 2.

1-ONP-100.01, St. Lucie Unit 1, Response to Fire, Rev. 14B

2-1800023, Unit 2 Fire Fighting Strategies, Section K-32, Rev. 23

Design Basis Documents

DBD-HVAC-1/2, Safety Related HVAC Systems, Rev. 0

DBD-C/F-1/2, Condensate and Feedwater System, Rev. 0

DBD-AFW-1/2, Auxiliary Feedwater System, Rev. 0

DBD-EDG-1/2, Emergency Diesel Generator System, Rev. 0

ATTACHMENT 2

ST. LUCIE NUCLEAR PLANT

LICENSE RENEWAL INSPECTION PLAN

LICENSE RENEWAL SCOPING RESULTS FOR MECHANICAL SYSTEMS

System Name	System in License Renewal Scope?
Air Blower	No
Auxiliary Feedwater and Condensate	Yes
Cathodic Protection	No
Chemical and Volume Control	Yes
Component Cooling Water	Yes
Containment Airborne Radioactivity Removal (Unit 1 only)	No
Containment Cooling	Yes
Containment Isolation	Yes
Containment Post Accident Monitoring	Yes
Containment Spray	Yes
Demineralized Makeup Water	Yes (Unit 2 only) Note1
Diesel Generators and Support Systems	Yes
Emergency Cooling Canal	Yes
Extraction Steam	No Note 2
Fire Protection	Yes
Fuel Pool Cooling	Yes
Instrument Air	Yes
Intake Cooling Water	Yes
Main Feedwater and Steam Generator Blowdown	Yes
Meteorological Monitoring	No
Primary Makeup Water	Yes Note 1

Reactor Coolant	Yes
Safety Injection	Yes
Sampling	Yes Note 1
Service Water	Yes Note 1
Turbine Cooling Water	Yes (Unit 1 only) Note 1
Ventilation	Yes
Waste Management	Yes Note 1

NOTES: 1. Although this system is not evaluated in the GALL Report, it was determined to perform a system intended function that satisfies the scoping criteria of 10 CFR 54.4(a).

2. Although this system is evaluated in the GALL Report, it was determined to not perform a system intended function that satisfies the scoping criteria of 10 CFR 54.4(a) and thus is not within the scope of license renewal.

ST. LUCIE NUCLEAR PLANT

LICENSE RENEWAL INSPECTION PLAN

LICENSE RENEWAL SCOPING RESULTS FOR STRUCTURES

System Name	Structure in License Renewal Scope?
Component Cooling Water Areas	Yes
Condensate Storage Tank Enclosures	Yes
Containments	Yes
Diesel Oil Equipment Enclosures	Yes
Emergency Diesel Generator Buildings	Yes
Fire House	No
Fire Rated Assemblies	Yes
Fuel Handling Buildings	Yes
Fuel Handling Equipment	Yes
Intake and Discharge Pipelines	No
Intake, Discharge, and Emergency Cooling Canals	Yes
Intake Structures	Yes
Intake Velocity Caps	No
Reactor Auxiliary Buildings	Yes
St. Lucie and Hutchinson Island Substations	No
Steam Trestle Areas	Yes
Switchyard	No
Turbine Buildings	Yes
Ultimate Heat Sink Dam	Yes
Yard Structures	Yes

ST. LUCIE NUCLEAR PLANT

LICENSE RENEWAL INSPECTION PLAN

LICENSE RENEWAL SCOPING RESULTS FOR ELECTRICAL/I&C SYSTEMS

System Name	System in License Renewal Scope?
120/208V Electrical	Yes
120V Vital AC	Yes
125V DC	Yes
4.16kV Electrical	Yes
480V Electrical	Yes
6.9kV Electrical	Yes
Communications	Yes
Computer Process and Reactivity	No
Containment Electrical Penetrations (conductor, non-metallic, and non-pressure boundary portions)	Yes
Data Acquisition Remote Terminal Unit	Yes
Generation and Distribution (includes Main, Auxiliary, and Start-up Transformers and the Switchyard)	No
Miscellaneous (includes EQ commodities)	Yes
Nuclear Instrumentation	Yes
Reactor Protection	Yes
Safeguards Panels	Yes
Station Grounding	Yes

ATTACHMENT 3
LIST OF ACRONYMS USED

ADV	Atmospheric Dump Valves
AFW	Auxiliary Feedwater System
AMR	Aging Management Review
CC	Containment Cooling
CCW	Component Cooling Water
CCWA	Component Cooling Water Areas
CP	Cathodic Protection System
CR	Condition Report
CS	Containment Spray System
CST	Condensate Storage Tank
CVCS	Chemical and Volume Control System
ECC	Emergency Cooling Canal
ECCS	Emergency Core Cooling Systems
EDG	Emergency Diesel Generator
EQ	Environmental Qualification Program
FPL	Florida Power and Light Company
HVAC	Heating Ventilation and Air Conditioning
IA	Instrument Air
ICW	Intake Cooling Water System
ILRT	Integrate Leak Rate Test
LLRT	Local Leak Rate Test
LR	License Renewal
LRA	License Renewal Application
NSR	Non Safety Related
NRR	NRC Office of Nuclear Reactor Regulation
RAB	Reactor Auxiliary Building
RAI	Request for Additional Information
RCS	Reactor Coolant System
RCSB	Reactor Containment Shield Building
RV	Reactor Vessel

RWT	Refueling Water Tank
SBO	Station Blackout Event
SCV	Steel Containment Vessel
SFPC	Spent Fuel Pool Cooling System
SGOBD	Steam Generator Open Blowdown System
SI	Safety Injection
SR	Safety Related
SSC	Systems, Structures, and Components
SSMP	Systems and Structures Monitoring Program
SW	Service Water System
TCW	Turbine Cooling Water
UFSAR	Updated Final Safety Analysis Report