UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
245 PEACHTREE CENTER AVENUE NE, SUITE 1200
ATLANTA, GEORGIA 30303-1257

January 27, 2015

EA-14-131

Mr. Mano Nazar
President and Chief Nuclear Officer
Nuclear Division
NextEra Energy
P.O. Box 14000
Juno Beach, FL 33408-0420

SUBJECT: ST. LUCIE PLANT UNIT 1 – NRC SUPPLEMENTAL INSPECTION REPORT 05000335/2014011

Dear Mr. Nazar:

In 1978 and 2012, your staff failed to implement design control and corrective action measures to ensure the watertight integrity of the Unit 1 reactor auxiliary building below the design basis flood elevation. This performance deficiency resulted in missing external flood barriers which were relied on to protect safety-related equipment from adverse impact due to a postulated design basis external flood event.

On September 24, 2014, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your St. Lucie Plant Unit 1. Based on the results of this inspection documented in NRC Inspection Report 05000335/2014009 dated September 24, 2014 (ADAMS Accession Number ML14267A337), and the final significance determination documented in NRC Inspection Report 05000335/2014010 dated November 19, 2014 (ADAMS Accession Number ML14323A786), the NRC assigned a white finding Action Matrix input for Unit 1 to the mitigating systems cornerstone in the third quarter of 2014 (ADAMS Accession Number ML14324A421).

In response to this Action Matrix input, the NRC informed you that a supplemental inspection under Inspection Procedure 95001, “Supplemental Inspection for One or Two White Inputs in a Strategic Performance Area,” would be required.

On November 11, 2014, you informed the NRC that St. Lucie Unit 1 was ready for the supplemental inspection.

On December 19, 2014, the NRC completed the supplemental inspection and the inspection team discussed the inspection results with Mr. Jensen and other members of your staff. Additionally, I discussed the implementation of corrective actions during a regulatory performance meeting with Mr. Jensen and your staff on the same date. The inspection team documented the results of this inspection in the enclosed inspection report.

The objectives of this supplemental inspection were to provide assurance that: (1) the root and contributing causes were understood, (2) the extent of condition and extent of cause were identified, and (3) corrective actions were sufficient to address the root and contributing causes and to preclude repetition. The inspection consisted of examination of activities conducted under your license as they related to safety, compliance with the commission's rules and regulations, and the conditions of your operating license. The inspectors reviewed selected procedures and records, observed activities and interviewed personnel.

The NRC determined that your staff's evaluation identified the primary root cause of the issue to be the failure to comply with design basis requirements when a plant modification installed conduit penetrations in the reactor auxiliary building (RAB) wall below flood level without internal flood seals. The design packages to install the conduits did not perform an in-depth evaluation of the changes being performed and since the items being installed were not safety-related, detailed tasks like the routing of the conduit through the RAB wall were not considered in the safety evaluation. Corrective actions to address the root cause and contributing causes included the installation of permanent qualified internal flood seals at the RAB end of the conduits, revising the Unit 1 and Unit 2 barrier drawings to identify the walls associated with internal and external flood barrier requirements, and developing and implementing periodic inspections of conduits that penetrate the RAB wall for integrity and waterproof condition.

The NRC has determined that completed or planned corrective actions were sufficient to address the performance that led to the white finding. Therefore, the performance issue will not be considered as an Action Matrix input after the end of the second quarter of 2015.

The NRC inspectors did not identify any findings. In accordance with Title 10 of the *Code of Federal Regulations* 2.390, "Public Inspections, Exemptions, Requests for Withholding," of the NRC's "Rules of Practice," a copy of this letter, its Enclosure, and your response (if any) will be available electronically for public inspection in the NRC's Public Document Room or from the Publicly Available Records (PARS) component of the NRC's Agency wide Documents Access and Management System (ADAMS). ADAMS is accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams.html (the Public Electronic Reading Room).

Sincerely,

/RA/

Shane Sandal, Branch Chief (Acting)
Reactor Projects Branch 3
Division of Reactor Projects

Docket Nos.: 50-335
License Nos.: DPR-67

Enclosure: IR 05000335/2014011
w/Attachment: Supplementary Information

cc Distribution via ListServ

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ADAMS: ☒ Yes ACCESSION NUMBER:_____ ☒ SUNSI REVIEW COMPLETE ☐ FORM 665 ATTACHED

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Letter to Mano Nazar from Shane Sandal dated January 27, 2015.

SUBJECT: ST. LUCIE PLANT UNIT 1 – NRC SUPPLEMENTAL INSPECTION REPORT 05000335/2014011

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U.S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket No.:	50-335
License No.:	DPR-67
Report No:	05000335/2014011
Licensee:	Florida Power & Light Company (FP&L)
Facility:	St. Lucie Plant Unit 1
Location:	6501 South Ocean Drive Jensen Beach, FL 34957
Dates:	December 15-19, 2014
Inspectors:	M. Endress, Resident Inspector, Turkey Point Nuclear Plant (lead) G. Croon, Resident Inspector, Oconee Nuclear Station
Approved by:	Shane Sandal, Branch Chief (Acting) Reactor Projects Branch 3 Division of Reactor Projects

Enclosure

SUMMARY OF FINDINGS

Inspection Report (IR) 05000335/2014011; 12/15/2014 – 12/19/2014; St. Lucie Nuclear Plant, Unit 1; Supplemental Inspection – Inspection Procedure (IP) 95001

The inspection was conducted by two resident inspectors. No findings were identified. NUREG-1649, "Reactor Oversight Process," (ROP) Revision 5, dated February 2014, describes the NRC's program for overseeing the safe operation of commercial nuclear power reactors.

Cornerstone: Mitigating Systems

The NRC staff performed this supplemental inspection in accordance with IP 95001, "Supplemental Inspection for One or Two White Inputs in a Strategic Performance Area," to assess the licensee's evaluation associated with the Unit 1 reactor auxiliary building (RAB) flooding event that occurred on January 9, 2014. The NRC staff previously characterized this issue as having low to moderate safety significance (white), as documented in NRC IR 05000335/2014010 (ADAMS Accession Number ML14323A786).

During this supplemental inspection, the inspectors determined that the licensee performed a comprehensive evaluation of water intrusion into the Unit 1 RAB during a heavy rain storm that occurred on January 9, 2014. The licensee identified the root cause of the issue to be the failure to comply with design basis requirements when a plant modification installed conduit penetrations in the RAB wall below flood level without internal flood seals. The installation of the conduits in the wall occurred in 1978 and 1982 during the installation of the primary water degassifier and transfer pump, and the waste monitor tank addition, respectively. The design packages did not perform an in-depth evaluation of the changes being performed and since the items being installed were not safety-related, detailed tasks like the routing of the conduit through the RAB wall were not considered in the safety evaluation. In addition, the licensee failed to identify the missing conduit internal flood barriers during walkdowns performed in response to the NRC's "Request for Information Pursuant to Title 10 of the *Code of Federal Regulations* 50.54(f) Regarding Recommendations 2.1, 2.3, and 9.3, of the Near-Term Task Force Review of Insights from the Fukushima Dai-ichi Accident," dated March 12, 2012. Corrective actions to address the root cause and contributing causes included the installation of permanent qualified internal flood seals at the RAB end of the conduits, revising the Unit 1 and Unit 2 barrier drawings to identify the walls associated with internal and external flood barrier requirements, and developing and implementing periodic inspections of conduits that penetrate the RAB wall for integrity and waterproof condition. The licensee also re-performed a majority of the Fukushima flood protection walkdowns and submitted a revised flood protection walkdown report to the NRC.

NRC-Identified and Self-Revealing Findings

None

Licensee-Identified Violations

None

REPORT DETAILS

4. OTHER ACTIVITIES

4OA4 Supplemental Inspection (95001)

.1 Inspection Scope

The supplemental inspection was performed in accordance with IP 95001 to assess the licensee's evaluation of a white finding which affected the mitigating systems cornerstone objective in the reactor safety strategic performance area. The inspection objectives were to:

- Provide assurance that the root and contributing causes were understood.
- Provide assurance that the extent of condition and extent of cause were identified.
- Provide assurance that the licensee's corrective actions were sufficient to address the root and contributing causes and to preclude repetition.

The inspectors also held discussions with licensee personnel to ensure that the root and contributing causes and the contribution of safety culture components were understood and corrective actions taken or planned were appropriate to address the causes and preclude repetition.

The licensee entered the Regulatory Response Column of the NRC's Action Matrix in the third quarter of 2014 as a result of one inspection finding of low to moderate safety significance (white) associated with missing external flood protection seals in the Unit 1 RAB which resulted in a flooding event on January 9, 2014. The licensee notified the NRC on November 11, 2014 that they were ready for this supplemental inspection.

The finding was characterized as having low to moderate safety significance (white), as documented in NRC IR 05000335/2014010. The white finding was associated with two violations and involved the licensee's failure to implement measures to ensure the watertight integrity of the Unit 1 RAB. The first violation was a violation of Appendix B to 10 *Code of Federal Regulations* (CFR) Part 50, Criterion XVI, "Corrective Action," for failure to identify internal flood barriers missing on six conduits that penetrated the Unit 1 RAB wall below the design basis external flood elevation. The second violation was a violation of Appendix B to 10 CFR Part 50, Criterion III, "Design Control," for the failure to translate the design basis associated with external flood protection into specifications, drawings, procedures and instructions from 1978 and 1982 until 2014.

In addition to the root cause evaluation for the Unit 1 RAB flooding event, the inspectors also reviewed the root cause evaluation for the unusual event declared for Unit 1 due to rainstorm flooding, action request (AR) 1932155. This review evaluated the performance of the site storm drain system and corrective actions taken as a result of the flooding. The inspectors reviewed the root and contributing causes as well as the corrective actions taken or planned.

.2 Evaluation of the Inspection Requirements

.01 Problem Identification

a. Determine that the evaluation documented who identified the issue (i.e. licensee, self-revealing, or NRC) and under what conditions the issue was identified

The inspectors determined that the licensee's evaluation of the missing external flood seals appropriately determined who and under what conditions the issue was identified.

The missing conduit flood seals were self-revealed by water intrusion into the Unit 1 RAB during a rain event on January 9, 2014. The licensee's evaluation classified the issue as a self-revealing event.

b. Determine that the evaluation documented how long the issue existed, and prior opportunities for identification

In 1978 and 1982, a plant modification installed conduit penetrations in the RAB below the design basis flood elevation without internal seals. Although the penetrations were properly grouted, the modification implementation failed to seal the conduits internally per design basis requirements. The licensee determined that the flooding event in the Unit 1 RAB was caused by the failure to install the internal seals. There were two missed opportunities to identify the missing conduit flood seals that the licensee identified in 2009 and 2010 when corrosion of the electrical conduits was identified during plant walkdowns. The licensee missed another opportunity to identify the missing conduit flood seals in 2012 as part of the post-Fukushima flood protection walkdowns performed using the guidance given in Nuclear Energy Institute (NEI) 12-07, "Guidelines for Performing Verification Walkdowns of Plant Flood Protection Features."

The inspectors determined that the licensee appropriately identified how long the condition existed and any prior opportunities for identification.

c. Determine that the evaluation documented the plant risk-specific consequences (as applicable) and compliance concerns associated with the issue

The inspectors determined that the root cause evaluation (RCE) adequately documented the risk consequences and compliance concerns. A probabilistic risk assessment analysis was completed by the licensee for both units to determine any increase in core damage frequency and to analyze the cumulative effect. In addition, the licensee implemented corrective actions to restore the watertight integrity of the Unit 1 RAB below the design basis flood elevation.

In addition, the inspectors determined that the RCE adequately addressed the condition of Unit 1 and Unit 2 RAB penetrations below flood level as walkdowns and testing were performed to assure that no common cause failure existed. In addition, the Unit 2 RAB did not undergo the same electrical conduit modification that was performed on the Unit 1 RAB.

d. Findings

No findings were identified.

.02 Root Cause, Extent of Condition, and Extent of Cause Evaluation

a. Determine that the problem was evaluated using a systematic methodology to identify the root and contributing causes

The inspectors noted that the licensee used a combination of different systematic methods to identify root and contributing causes for the Unit 1 RAB flooding event:

- Data gathering through interviews and document review
- Events and causal factor analysis
- Barrier analysis
- Cause and effect diagramming
- Support/refute methodology
- Fault tree analysis
- Safety culture evaluation
- Use of independent team to perform mock inspection and analysis

Additionally, the inspectors determined that the methods were appropriate for the technical complexity of the issues that were evaluated.

b. Determine that the root cause evaluation was conducted to a level of detail commensurate with the significance of the problem

The root and contributing causes identified in the licensee's evaluation are summarized below:

- The licensee determined that the root cause was a plant modification which installed conduit penetrations in the Unit 1 RAB wall below flood level without internal flood seals.

- The licensee concluded that a lack of focus on external flooding events in station programs and procedures related to flooding and barrier management was a contributing cause.

- The licensee determined another contributing cause was less than adequate supervisory oversight which resulted in an inadequate review of plant design features associated with the degraded conduits.

- The licensee concluded that a lack of knowledge of the RAB design for mitigating external flooding was also a contributing cause.

- The licensee also concluded that a contributing cause was that flood protection features which provide defense-in-depth protection for the RAB during an external flooding event were marginal. Examples of defense-in-depth protection features that were marginal included a six inch emergency core cooling system (ECCS) pipe tunnel curb that could be raised to provide additional flood protection margin and the ability to prevent storm water backflow onto the component cooling water (CCW) platform if the storm drain water system backed up.

The licensee also performed an evaluation of the failure of the site's non-safety related storm drain system and determined that the root cause of the failure was inadequate maintenance of the drainage system. The inadequate maintenance allowed silt, sedimentation, debris and vegetation to build up in the water retention basins, piping, and canals which led to a backup of water in the Unit 1 and Unit 2 condensate pump pits and CCW areas.

The inspectors determined that the RCE was of sufficient detail to support the identified root and contributing causes and was commensurate with the significance of the problem.

c. Determine that the root cause evaluation included a consideration of prior occurrences of the problem and knowledge of prior operating experience

The licensee identified several industry issues associated with external flooding mitigation and strategies; however, the licensee determined that there were no direct missed opportunities since St. Lucie's external flooding design basis requires no operator action or actively operated equipment to mitigate external floodwaters. The licensee did determine that there was a missed opportunity to improve defense in depth for external flooding based on the operating experience (OE) reviewed.

The inspectors determined that the RCE for the Unit 1 RAB flooding event adequately considered prior occurrences of the problem and knowledge of prior operating experience.

d. Determine that the root cause evaluation addressed the extent of condition and the extent of cause of the problem

The extent of condition evaluation considered the lack of internal flood seals in the conduits that penetrated the RAB wall as well as the failure of the Fukushima flood protection walkdowns to identify the degraded conduits. The licensee determined that a total of six conduits penetrated the Unit 1 RAB wall from the ECCS pipe tunnel. The conduits were found to have excessive corrosion in both the ECCS pipe tunnel and in the CCW building. The junction boxes that the conduits are routed through in the CCW building were also found to have excessive corrosion and holes. The modification that installed the Unit 1 conduits that penetrated the RAB wall was not performed on Unit 2. Therefore, Unit 2 did not have conduit penetrations in the RAB wall from the ECCS pipe tunnel. The licensee also reviewed the results of the November 2012 Fukushima flood protection walkdowns and determined that several flood protection features had not

been walked down, several packages had not been adequately documented, and several issues had not been adequately documented or needed clarification. As a part of the extent of condition evaluation, the licensee also reviewed other site flood protection feature walkdowns and documentation to determine any weaknesses. As a result, the licensee determined that identification of abandoned piping could pose as a potential pathway into the RAB. Walkdowns and identification of piping and abandoned piping was performed and repairs were made by the licensee. The licensee also re-performed a majority of the Fukushima flood protection walkdowns and submitted a revised report to the NRC.

The extent of cause review for the root cause involved the evaluation of relevant design engineering documents for all types of penetrations installed through fire, high energy line break (HELB), flood, and ventilation qualified barriers. The review determined that there was insufficient detail for internal flooding, external flooding, radiation, and ventilation barriers. The licensee revised the Unit 1 and Unit 2 barrier drawings to identify the walls for internal and external flood barrier requirements as well as ventilation and radiation barrier requirements. The licensee also evaluated the site storm drainage system. The licensee determined the failure of the site storm drainage system was a degradation of the defense in depth to prevent site flooding.

The inspectors determined that the evaluation for the Unit 1 RAB flooding event adequately addressed the extent of condition and extent of cause. The inspectors also noted that the licensee implemented corrective actions to address issues identified by the extent of condition or extent of cause analyses.

e. Determine that the root cause, extent of condition, and extent of cause evaluations appropriately considered the safety culture components as described in Inspection Manual Chapter (IMC) 0305

The licensee's evaluation identified weaknesses associated with the following cross-cutting aspects:

- Human Performance component of Design Margins (H.6): This was associated with the root cause in that flood seals were not installed in electrical conduits below flood level to maintain the RAB as a waterproof structure as required by the design basis. This was also related to a contributing cause in that flood protection features which provided defense-in-depth for the RAB to mitigate or prevent external flooding were marginal.
- Human Performance component of Resources (H.1): This related to the contributing cause that the licensee failed to ensure that station programs and procedures related to flooding and barrier management had a focus on external flooding events.
- Human Performance component of Field Presence (H.2): This related to the contributing cause that there was less than adequate supervisory oversight of the flooding protection walk downs that were performed that failed to identify the degraded conduit as well as the inadequate review of plant design features associated with the degraded conduits.

- Human Performance component of Training (H.9): This related to the contributing cause of lack of knowledge and awareness of external flooding hazards by station personnel.

The inspectors determined that the safety culture components were appropriately considered and reviewed in the licensee's evaluation.

f. Findings

No findings were identified.

.03 Corrective Actions

a. Determine that appropriate corrective actions were specified for each root and contributing cause or that there was an adequate evaluation for why no corrective actions were necessary

The inspectors determined that appropriate corrective actions were established to address each of the root and contributing causes for the Unit 1 RAB missing external flood seals.

To address the root cause, the licensee implemented corrective actions to ensure the installation of permanent flood seals in all conduits entering the RAB and implemented administrative controls to protect the Engineering Change Scope and Screening procedure as a corrective action to prevent reoccurrence.

For the contributing causes, the licensee implemented corrective actions to include revising Unit 1 and Unit 2 barrier drawings to identify the walls associated with internal and external flood barrier requirements, implementing a preventative maintenance (PM) requirement to inspect the boot seals that are used for flood protection, revising operating procedures to include external flooding event guidance, re-performing flood protection walk downs and have a third-party independently review the results, and conduct external flood awareness training with Engineering, Operations, and Maintenance Department personnel.

To address the failure of the site storm drainage system, the licensee implemented corrective actions to include implementing a PM program for the station's subsurface drainage system and storm water system and removing blockage of the subsurface drainage piping that contributed to the constriction of flow to the percolation ponds.

b. Determine that the corrective actions have been prioritized with consideration of the risk significance and regulatory compliance

The inspectors determined that the corrective actions for the events were appropriately prioritized relative to their risk significance and regulatory compliance.

c. Determine that a schedule has been established for implementing and completing the corrective actions

The inspectors determined that the corrective actions for the risk significant issues had been completed or reasonably scheduled.

The permanent conduit flood seals were installed and the corroded conduit was replaced. Also, preventative maintenance schedules were implemented on boot seals that maintain the water tight integrity of the RAB wall. In addition, associated barrier program documents (drawings, procedures, design screening) were updated to reflect the correct barrier integrity requirements.

d. Determine that quantitative or qualitative measures of success have been developed for determining the effectiveness of the corrective actions to prevent recurrence

The inspectors determined that effectiveness reviews had been completed or were scheduled for the root cause and contributing causes of the flooding inside the Unit 1 RAB. Additionally, the inspectors determined that each effectiveness review had quantitative or qualitative criteria established to measure success.

The licensee scheduled effectiveness reviews for 2015 and 2016 to evaluate that the flood seals installed were effective by reviewing rain events where severe rain challenged the storm drain system and confirming that Operations was not required to enter abnormal operating procedures for RAB flooding. The licensee also scheduled an effectiveness review for 2016 to review design change packages from 2015 to ensure that the applicable barrier programs were given appropriate consideration for the integrity of the barriers that could be impacted by design changes.

e. Determine that the corrective actions planned or taken adequately address a Notice of Violation (NOV) that was the basis for the supplemental inspection, if applicable

The NRC issued an Apparent Violation (AV) to the licensee on September 24, 2014 (ADAMS Accession Number ML14267A337). The licensee did not contest the characterization of the AV and provided the NRC with a written response on October 23, 2014 (ADAMS Accession Number ML14300A013). The licensee's response described: (1) corrective steps which have been taken and the results achieved; (2) corrective steps which will be taken; (3) that full compliance was achieved; and (4) the reasons for the violation. The NRC issued an NOV to the licensee on November 19, 2014 (ADAMS Accession Number ML14323A786). During this inspection, the inspectors confirmed that the licensee's RCE and planned and taken corrective actions addressed the NOV. The licensee implemented immediate corrective actions following the rain event on January 9, 2014, to install temporary flood seals in the conduits which penetrated the Unit 1 RAB wall. This provided reasonable assurance that external flood water would not enter the RAB through the affected conduits until permanent repairs could be completed. The licensee restored full compliance on July 16, 2014, by installing permanent flood seals.

f. Findings

No findings were identified.

.04 Evaluation of IMC 0305 Criteria for Treatment of Old Design Issues

The licensee did not request credit for self-identification of an old design issue; therefore, the risk-significant issue was not evaluated against the IMC 0305 criteria for treatment of an old design issue.

4OA6 Meetings, Including Exit

.1 Exit Meeting

On December 19, 2014, the inspectors presented the inspection results to Mr. Jensen and other members of the licensee's staff. The inspectors confirmed that no proprietary information was obtained during the course of the inspection.

.2 Regulatory Performance Meeting

On December 19, 2014, the acting NRC Branch Chief, Shane Sandal, held a regulatory performance meeting with Mr. Jensen and the licensee's staff to review the results of the root cause evaluation and proposed corrective actions.

ATTACHMENT: SUPPPLEMENTARY INFORMATION

SUPPLEMENTARY INFORMATION

KEY POINTS OF CONTACT

Licensee personnel:
E. Katzman, Licensing Manager
M. Jones, Engineering Director
J. Jensen, Site Vice-President
R. Coffey, Plant General Manager
R. Sciscente, Licensing
S. Catron, Fleet Licensing Manager
J. Petro, Licensing Director
E. Hollowell, Engineering
R. Kilian, Operations
G. Atkinson, Training
C. Mdala, Engineering
G. McKenzie, Engineering
R. Bashwinen, Performance Improvement Manager
B. Francis, Outage Manager
J. Piazza, Maintenance Director
M. Haskin, Projects
C. Bach, Systems Engineering
J. DiVentura, Employee Concerns Program Manager
R. Pitts, Operations
C. Workman, Security Manager
J. Errico, Engineering

NRC personnel:
S. Sandal, Acting Chief, Reactor Projects Branch 3, Division of Reactor Projects Region II
T. Morrissey, Senior Resident Inspector, St. Lucie

LIST OF ITEMS OPENED, CLOSED AND DISCUSSED

Opened

None

Opened and Closed

None

Closed

05000335/2014009-01	VIO	Failure to Implement Measures to Ensure the Watertight Integrity of the Unit 1 Reactor Auxiliary Building (Section 4OA3.1)

LIST OF DOCUMENTS REVIEWED

Procedures
PI-AA-104-1000, Corrective Action, Rev 1
PI-AA-100-1005, Root Cause Analysis, Rev 10
ADM-17.25, Plant Barrier Control, Rev 11
EN-AA-102, Margin Management Program, Rev 1
EN-AA-202-1001, Engineering Change Scope and Screening, Rev 4
EN-AA-202-1001-F01, Engineering Change Scope and Screening Checklist, Rev 6
1-ADM-09.23, Time Critical Actions, Rev 3
1-AOP-53.01, Abnormal Operating procedure, Rev 12
1-NOP-53.10, Isophase Bus Duct Cooling System Operation, Rev 5
1-OSP-15.01, Fire Door Surveillance, Rev 5
2-ADM-09.23, Time Critical Actions, Rev 4
2-AOP-53.01, Main Generator, Rev 11
2-NOP-53.10, Isophase Bus Duct Cooling System Operation, Rev 3
2-OSP-15.01, Fire Door Surveillance, Rev 3
ADM-17.16, Implementation of the Configuration Risk Management Program, Rev 14
1-AOP-24.01, RAB Flooding, Rev 72
1-ADM-3.06, Electrical Flash Personal Protective Equipment & Protection Boundary Matrices, Rev 7
005753, Severe Weather Preparations, Rev 76

ARs
1932155, Root Cause Evaluation for UE Declared for Unit 1 due to Rainstorm Flooding
1932213, Penetration P19 Pipe Seals Leaking
1932648, ACE for External Flooding Event on 1/9/14
1941159, RAB Flooding Event – Root Cause Evaluation
1982791, PSL 2014 Mid-Cycle Plan
1943185, Document Apparent Cause for 2012 Flooding Walkdown Report
1932177, Unit 2 Entered Main Generator AOP & Rapid Downpower
1935857, Crew 2 Self-Assessment Unit 1 RAB Flooding Event 1-9-14
1947268, Evaluate Unit 1 LER 2014-001 for Training Impact
1932377-01, PSL1 RAB Water Intrusion POR, Rev 1
1804496, St. Lucie Unit 1 Electrical Manholes Missing or Degraded Conduit Seals
1800822, St. Lucie Unit 2 Electrical Manholes Missing or Degraded Conduit Seals

ARs Generated From Inspection
2013423, Track Actions for Portable Water Removal Pumps
2013487, Improvement Opportunity for 1-ARP-01-N00
2013544, Cancellation of Significance Level 2 Action without CARB Approval
2013548, Flood Door RA-5 Undogged on Unit 1
2013551, Perform Visual Inspection of 1B2 MCC
2013742, 1B2 MCC Inspection Results and Inadequate Design Review
2013752, Revise 1-AOP-24.01 RAB Flooding
2013866, Retention Pond Canal Banks in Disrepair

2013870, Small Diameter Storm Drain Pipes Clean-Up2013871, Permanent Footprint for Temporary Water Removal Pumps
2013872, Maximum Safe Water Height in RAB -.5' Hallway
2014201, 50.59 Applicability Review for ADM-09.23

Miscellaneous
EC 281564, Flood Seal Installation on Conduit
EC 281568, Update of Penetration Schedule for Reactor Auxiliary Buildings
EC 277219, Alternate Flood Seal Details for Electrical Conduits at St Lucie Units 1 and 2
PSL-ENG-SENS-06-050, Evaluation of Plant Barriers, Rev 2
8770-G-088, Flow Diagram Containment Spray and Refueling Water System
8770-B-327 Sheet 456, Radiation Monitor, Rev 22
8770-B-327 Sheet 565, Liquid Waste Flow Control Valves FCV-6627X, V-6739, Rev 10
8770-B-327 Sheet 573, Liquid Waste Flow Control Valves F-6627, F-6648, Rev 12
8770-B-335 Sheet 87, Power Distribution & Motor Data, Rev 23
8770-G-378, Reactor Auxiliary Building Underground Conduit & Grounding Sheet 2, Rev 125
8770-R-4005, 480V MCC 1B-2 Radwaste Outline & Summary, Rev 1
WO 40357582, Inspect 1BA MCC
PSL OPS 0702610, Storm Drain System (Lesson Plan), Rev 4
SCEG-032, Cable Condition Monitoring Program, Rev 0
Training Bulletin for Unit 1 RAB Flooding, TB8004934
U1 UFSAR, Amend 26
U2 UFSAR, Amend 21