



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

March 8, 2018

Mr. Mano Nazar  
President and Chief Nuclear Officer  
Nuclear Division  
Florida Power & Light Company  
Mail Stop EX/JB  
700 Universe Blvd.  
Juno Beach, FL 33408

**SUBJECT: SAINT LUCIE NUCLEAR PLANT – U.S. NUCLEAR REGULATORY  
COMMISSION EMERGENCY PREPAREDNESS INSPECTION REPORT  
05000335/2018502 AND 05000389/2018502**

Dear Mr. Nazar:

On February 16, 2018, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your Saint Lucie Nuclear Plant and the NRC inspectors discussed the results of this inspection with members of your staff. The results of this inspection are documented in the enclosed report.

No NRC-identified or self-revealing findings were identified during this inspection.

This letter, its enclosure, and your response (if any) will be made available for public inspection and copying at <http://www.nrc.gov/reading-rm/adams.html> and at the NRC Public Document Room in accordance with 10 CFR 2.390, "Public Inspections, Exemptions, Requests for Withholding."

Sincerely,

*/RA/*

Eugene F. Guthrie, Chief  
Operator Licensing Branch 2  
Division of Reactor Safety

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

Enclosure:  
NRC IR 05000335, 389/2018502  
w/Attachment: Supplementary Information

cc: Distribution via Listserv

SUBJECT: SAINT LUCIE NUCLEAR PLANT – U.S. NUCLEAR REGULATORY  
 COMMISSION EMERGENCY PREPAREDNESS INSPECTION REPORT  
 05000335/2018502 AND 05000389/2018502

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**U.S. NUCLEAR REGULATORY COMMISSION  
Inspection Report**

Docket Number(s): 05000335 and 05000389

License Number(s): DPR-67 and NPF-16

Report Number(s): 05000335/2018502 and 05000389/2018502

Enterprise Identifier: I-2018-502-0005

Licensee: Florida Power and Light

Facility: Saint Lucie Nuclear Plant, Units 1 and 2

Location: Jensen Beach, FL

Inspection Dates: February 12 – 16, 2018

Inspectors: Steven P. Sanchez, Senior Emergency Preparedness Inspector  
Christopher A. Fontana, Emergency Preparedness Inspector  
Jacqwan S. Walker, Emergency Preparedness Inspector (In-Training)  
Wade T. Loo, Senior Health Physicist  
Steven W. Roberts, Resident Inspector

Approved By: Eugene F. Guthrie, Chief  
Operations Branch 2  
Division of Reactor Safety

Enclosure

## **SUMMARY**

Inspection Report (IR) 05000335/2018502 and 05000389/2018502; 02/12/2018 – 02/16/2018;  
Saint Lucie Nuclear Plant, Units 1 and 2; Exercise and Baseline Inspection

This report covers an announced inspection by three emergency preparedness inspectors, one resident inspector, and one senior health physicist. The U.S. Nuclear Regulatory Commission's (NRC) program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 6.

The NRC inspectors did not identify any findings or violations of more than minor significance.

## REPORT DETAILS

### 1. REACTOR SAFETY

Cornerstone: Emergency Preparedness

#### 1EP1 Exercise Evaluation

##### a. Inspection Scope

The onsite inspection consisted of the following review and assessment:

- The adequacy of the licensee's performance in the biennial exercise, conducted on February 14, 2018, was reviewed and assessed regarding the implementation of the Risk Significant Planning Standards in 10 CFR 50.47(b)(4), (5), (9), and (10); which address emergency classification, offsite notification, radiological assessment, and protective action recommendations, respectively.
- The overall adequacy of the licensee's emergency response facilities with regard to NUREG-0696, "Functional Criteria for Emergency Response Facilities," and Emergency Plan commitments. The facilities assessed were the Control Room Simulator, Technical Support Center, Operations Support Center, and the offsite Emergency Operations Facility.
- Other performance areas, such as the emergency response organization's (ERO) recognition of abnormal plant conditions; command and control, intra- and inter-facility communications; prioritization of mitigation activities; utilization of repair and field monitoring teams; interface with offsite agencies; and the overall implementation of the emergency plan and its implementing procedures.
- Past performance issues from NRC inspection reports and Federal Emergency Management Agency (FEMA)/Department of Homeland Security (DHS) exercise reports to determine the effectiveness of corrective actions as demonstrated during this exercise to ensure compliance with 10 CFR 50.47(b)(14).
- The post-exercise critique process and the presentation to the licensee's senior management conducted on February 16, 2018, to evaluate the licensee's self-assessment of its ERO performance during the exercise, and to ensure compliance with 10 CFR Part 50, Appendix E, Subsection IV.F.2.g.

The inspectors reviewed various documents, which are listed in the Attachment. An NRC representative also attended the FEMA-sponsored public meeting on February 16, 2018. This inspection activity satisfied one inspection sample for the exercise evaluation on a biennial basis as defined in NRC Inspection Procedure (IP) 71114.01, "Exercise Evaluation".

b. Findings

No findings were identified.

1EP4 Emergency Action Level and Emergency Plan Changes

a. Inspection Scope

Since the last NRC inspection of this program area, two revisions to the emergency plan, two revisions to the emergency action levels, and several revisions to emergency plan implementing procedures had been made. The licensee determined that, in accordance with 10 CFR 50.54(q), the emergency plan continued to meet the requirements of 10 CFR 50.47(b), and Appendix E to 10 CFR Part 50. The inspectors reviewed the revisions, and sampled implementing procedure changes to evaluate potential reductions in the effectiveness of the Plan. As this review was not documented in a Safety Evaluation Report, and does not constitute formal NRC approval of the changes, these changes remain subject to future NRC inspection in their entirety.

The inspection was conducted in accordance with NRC IP 71114.04, "Emergency Action Level and Emergency Plan Changes". The applicable planning standards of 10 CFR 50.47(b), and its related requirements in 10 CFR Part 50, Appendix E, were used as reference criteria. The inspectors reviewed various documents, which are listed in the Attachment to this report. This inspection activity satisfied one inspection sample for the emergency action level and emergency plan changes on an annual basis.

b. Findings

No findings were identified.

1EP8 Exercise Evaluation – Scenario Review

a. Inspection Scope

Prior to the onsite inspection, the inspectors conducted an in-office review of the exercise objectives and scenario submitted to the NRC using IP 71114.08, "Exercise Evaluation - Scenario Review," to determine if the exercise would test major elements of the emergency plan as required by 10 CFR 50.47(b)(14). The inspectors reviewed various documents, which are listed in the Attachment to this report. This inspection activity satisfied one inspection sample for the exercise evaluation on a biennial basis.

b. Findings

No findings were identified.

#### 4. OTHER ACTIVITIES

##### 4OA1 Performance Indicator Verification

###### a. Inspection Scope

The inspectors sampled licensee submittals relative to the performance indicators (PIs) listed below for the period January 1, 2017, through December 31, 2017. To verify the accuracy of the PI data reported during that period, PI definitions and guidance contained in Nuclear Energy Institute 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 7, was used to confirm the reporting basis for each data element.

###### Emergency Preparedness Cornerstone

- Drill/Exercise Performance (DEP)
- Emergency Response Organization (ERO) Readiness
- Alert and Notification System (ANS) Reliability

For the specified review period, the inspectors examined data reported to the NRC, procedural guidance for reporting PI information, and records used by the licensee to identify potential PI occurrences. The inspectors verified the accuracy of the PIs for ERO and DEP through review of a sample of drill and event records. The inspectors reviewed selected training records to verify the accuracy of the PI for ERO drill participation for personnel assigned to key positions in the ERO. The inspectors verified the accuracy of the PI for ANS reliability through review of a sample of the licensee's records of periodic system tests. The inspectors also interviewed the licensee personnel who were responsible for collecting and evaluating the PI data. Licensee procedures, records, and other documents reviewed within this inspection area are listed in the Attachment. This inspection satisfied three inspection samples for PI verification on an annual basis as defined in NRC IP 71151, "Performance Indicator Verification".

###### b. Findings

No findings were identified.

##### 4OA6 Meetings

On February 16, 2018, the lead inspector presented the inspection results to Mr. D. Deboer and other members of the plant staff. The inspectors confirmed that no proprietary information was provided during the inspection.

ATTACHMENT: SUPPLEMENTARY INFORMATION

## **SUPPLEMENTARY INFORMATION**

### **KEY POINTS OF CONTACT**

#### Licensee personnel

H. Anderson, Performance Improvement  
R. Bailey, Emergency Preparedness Coordinator  
R. Baird, Training Manager  
B. Beltz, Operations Director  
D. Deboer, Site Director  
A. Dong, Maintenance Director  
S. Duston, Chemistry Manager  
T. Eck, Security Manager  
P. Ensmenger, OSC Controller  
K. Frehafer, Senior Licensing Engineer  
J. Francis, Radiation Protection Manager  
K. Hammond, Performance Assessment Manager  
J. Hunt, Senior Emergency Preparedness Coordinator  
M. Jones, Engineering Director  
D. Lane, Security Analyst  
J. McCullough, Security Analyst  
K. Paez, Performance Improvement Supervisor  
W. Parks, Operations Corporate Functional Area Manager  
P. Polfleit, Emergency Preparedness Corporate Functional Area Manager  
D. Ross, Engineering Manager  
C. Santos, Work Controls Director  
R. Sciscente, Senior Licensing Engineer  
M. Snyder, Licensing Manager  
T. Spillman, Assistant Operations Manager – Training  
D. Taylor, Emergency Preparedness Manager  
A. Weir, Senior Emergency Preparedness Coordinator

### **LIST OF DOCUMENTS REVIEWED**

#### 1EP1 Exercise Evaluation

##### Procedures

St. Lucie Plant Radiological Emergency Plan, Rev. 66  
2-AOP-22.01, Rapid Downpower, Rev. 24  
2-AOP-25.02, Ventilation Systems, Rev. 9  
2-AOP-47.01B, Loss of a Safety Related AC Bus – Train B, Rev. 12  
2-AOP-50.08, Loss of 125 VDC Station Battery Charger, Rev. 4  
2-EOP-01, Standard Post Trip Actions, Rev. 38  
2-EOP-3, Loss of Coolant Accident (LOCA), Rev. 39  
2-EOP-15, Functional Recovery, Rev. 47  
2-EOP-99, Appendices/Figures/Tables/Data Sheets, Rev. 60



EP-AA-101, Nuclear Division Drill and Exercise Program, Rev. 2  
 EP-AA-101-1000, Nuclear Division Drill and Exercise Procedure, Rev. 20  
 EP-AA-101-1000-10001, Nuclear Division Drill and Exercise Objectives and Demonstration Criteria, Rev. 7  
 EPIP-01, Classification of Emergencies, Rev. 26  
 EPIP-02, Duties and Responsibilities of the Emergency Coordinator, Rev. 44  
 EPIP-03, Emergency Response Organization Notification/Staff Augmentation, Rev. 29  
 EPIP-04, Activation and Operation of the Technical Support Center, Revision 54  
 EPIP-05, Activation and Operation of the Operational Support Center, Rev. 36  
 EPIP-06, Activation and Operation of the Emergency Operations Facility, Current Rev. 49  
 EPIP-07 Conduct of Evacuations/Assembly, Rev. 13  
 EPIP-08, Offsite Notifications and Protective Action Recommendations, Rev. 42  
 EPIP-10, Off-site Radiological Monitoring, Rev. 19  
 EPIP-13, Maintaining Emergency Preparedness - Emergency Exercises, Drills, Tests and Evaluations, Rev. 26  
 EPIP-14, Dose Assessment Using the Unified RASCAL Interface, Rev. 6  
 PI-AA-104-1000, Condition Reporting, Rev. 15  
 RP-SL-101-2000, Emergency Personnel Exposure Control, Rev. 1  
 RP-SL-102-2005, Environmental Monitoring During Emergencies, Rev. 4

#### Records and Data

St. Lucie Nuclear Plant, Emergency Response NRC Evaluated Drill February 14, 2018, Management Presentation, dated 2/16/18  
 St. Lucie Nuclear Plant, 2018 Emergency Preparedness, Evaluated Exercise, 2/14/18 Control Room Simulator, Operations Support Center, Technical Support Center, and Emergency Operations Facility/Joint Information Center - Documentation packages (logs, event notification forms, Protective Action Recommendations, Media releases, and Radiological Dose Assessments)

#### Corrective Action Program Documents (Action Requests)

AR 2249873, NRC Evaluated Drill 2018 – SAE not performed IAW drill scenario  
 AR 2249874, NRC Exercise 2018 – contaminated injured person  
 AR 2249927, NRC Exercise 2018 – unsatisfactory Objective 1.01, DC 5  
 AR 2249931, NRC Exercise 2018 – Simulator rollup  
 AR 2249936, NRC Exercise 2018 – TSC rollup  
 AR 2249938, NRC Exercise 2018 – OSC rollup  
 AR 2249942, NRC Exercise 2018 – EOF rollup  
 AR 2249944, NRC Exercise 2018 – JIC rollup

#### 1EP4 Emergency Action Level and Emergency Plan Changes

##### Procedures

St. Lucie Plant Radiological Emergency Plan, Rev. 65 & 66  
 EP-AA-100-1007, Evaluation of Changes to the Emergency Plan, Supporting Documents and Equipment [10 CFR 50.54(Q)], Rev. 5  
 EPG-03, Review & Revision of Emergency Preparedness Documents, Rev. 23  
 EPIP-08, Off-Site Notifications & Protective Action Recommendations Rev. 41 & 42

##### Change Packages

10 CFR 50.54(q) Screening Form for St. Lucie Plant Radiological Emergency Plan Rev. 65, dated 3/27/17

- 10 CFR 50.54(q) Evaluation Form for St. Lucie Plant Radiological Emergency Plan Rev. 65, dated 3/27/17
- 10 CFR 50.54(q) Screening Form for St. Lucie Plant Radiological Emergency Plan Rev. 66, dated 10/17/17
- 10 CFR 50.54(q) Evaluation Form for St. Lucie Plant Radiological Emergency Plan Rev. 66, dated 10/17/17
- 10 CFR 50.54(q) Screening Form for EPIP-08 Off-Site Notifications & PARs Rev. 42, dated 8/10/17
- 10 CFR 50.54(q) Evaluation Form for EPIP-08 Off-Site Notifications & PARs Rev. 42, dated 8/10/17

#### Corrective Action Program Documents

AR 2249290, Revise E-Plan to remove Table 3-2A footnote 3 (NRC-identified)

#### 1EP8 Exercise Evaluation

##### Procedures

- EP-AA-101, Nuclear Division Drill and Exercise Program, Rev. 2
- EP-AA-101-1000, Nuclear Division Drill and Exercise Procedure, Rev. 20
- EP-AA-101-1000-10001, Nuclear Division Drill and Exercise Objectives and Demonstration Criteria, Rev. 7

##### Records and Data

St. Lucie Nuclear Plant, 2018 Emergency Preparedness, Evaluated Exercise, February 14, 2018

#### 40A1 Performance Indicator Verification

##### Procedures

- 06.80.01, Transmission & Substation, Siren System Availability Test Procedure, Nuclear Field Operations, Rev. L
- ADM-25-02, NRC Performance Indicators, Current Rev. 35 & 36
- EPG-01, Emergency Preparedness Assessment and Performance Monitoring, Rev. 17
- PI-AA-104-1000, Corrective Action, Rev.15

##### Records and Data

- DEP opportunities documentation for 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup> quarters 2017
- Siren test data for 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup> quarters 2017
- Drill and exercise participation records of ERO personnel for 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup> quarters 2017

#### Corrective Action Program Documents

- AR 2184494, PSL Siren S-70 Test Failure
- AR 2203272, E-Plan classification was made that was not included in simulator exercise guide
- AR 2205662, Evaluate update to EAL table basis document
- AR 2210669, State notification forms shredded accidentally and was not recognized by crew
- CR 2208306-01, May 2017 Training drill PARS mismatch
- CR 2208295-01, May 2017 Training drill E-Plan Training Drill SAE

**LIST OF ACRONYMS USED**

ANS	Alert and Notification System
DEP	Drill and Exercise Performance
DHS	Department of Homeland Security
EAL	Emergency Action Level
EOF	Emergency Operations Facility
EP	Emergency Preparedness
EPIP	Emergency Plan Implementing Procedure
E-Plan	Emergency Plan
ERO	Emergency Response Organization
FEMA	Federal Emergency Management Agency
GE	General Emergency
IP	Inspection Procedure
JIC	Joint Information Center
NOUE	Notification of Unusual Event
OSC	Operations Support Center
PAR	Protective Action Recommendation
PI	Performance Indicator
SAE	Site Area Emergency
TSC	Technical Support Center