



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

March 18, 2016

Mr. Christopher Costanzo
Site Vice President
St. Lucie Nuclear Plant
Florida Power and Light Company
6501 S. Ocean Drive
Jensen Beach, FL 34957

**SUBJECT: SAINT LUCIE NUCLEAR PLANT – U.S. NUCLEAR REGULATORY COMMISSION
EMERGENCY PREPAREDNESS INSPECTION REPORT 05000335/2016502
AND 05000389/2016502**

Dear Mr. Costanzo:

On February 26, 2016, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your Saint Lucie Nuclear Plant, Units 1 and 2. The enclosed inspection report (IR) documents the inspection results that were discussed on February 25, 2016, with members of the plant staff.

The inspection examined activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations, and with the conditions of your license. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel.

No findings were identified during this inspection.

In accordance with Title 10 of the *Code of Federal Regulations* (10 CFR) 2.390, "Public inspections, exemptions, requests for withholding," of the NRC's "Agency Rules of Practice and Procedure," 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 NRC's Agencywide Documents Access and Management System (ADAMS); accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

/RA/

Brian R. Bonser, Chief
Plant Support Branch 1
Division of Reactor Safety

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

Enclosure:
NRC IR 05000335 and 389/2016502
w/Attachment: Supplementary Information

cc: Distribution via Listserv

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DISTRIBUTION:
See next page

PUBLICLY AVAILABLE NON-PUBLICLY AVAILABLE SENSITIVE NON-SENSITIVE

ADAMS: Yes ACCESSION NUMBER: ML16081A080 SUNSI REVIEW COMPLETE FORM 665 ATTACHED

OFFICE	RII:DRS/PSB1	RII:DRS/PSB1	RII:DRS/PSB1	RII:DRS/PSB1	ADM/TTC/STTB	RII:DRP/BR3	RII:DRS/PSB1
SIGNATURE	SPS via e-mail	CAF2	JDH9 via e-mail	WTL via e-mail	MES4 via e-mail	LJB4	BRB1
NAME	S. Sanchez	C. Fontana	J. Hickman	W. Loo	M. Speck	L. Suggs	B. Bonser
DATE	3/ 7 /2016	3/ 14 /2016	3/ 8 /2016	3/ 7 /2016	3/ 7 /2016	3/ 14 /2016	3/ 18 /2016
E-MAIL COPY	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO

OFFICIAL RECORD COPY

Letter to Christopher Costanzo from Brian Bonser dated March 18, 2016

SUBJECT: SAINT LUCIE NUCLEAR PLANT – U.S. NUCLEAR REGULATORY COMMISSION
EMERGENCY PREPAREDNESS INSPECTION REPORT 05000335/2016502
AND 05000389/2016502

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U.S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket Nos: 05000335 and 05000389

License Nos: DPR-67 and NPF-16

Report No.: 05000335/2016502 and 05000389/2016502

Licensee: Florida Power and Light Company

Facility: Saint Lucie Nuclear Plant

Location: Jensen Beach, FL

Dates: February 22–26, 2016

Inspectors: Steven Sanchez, Sr. Emergency Preparedness Inspector
Christopher Fontana, Emergency Preparedness Inspector
John Hickman, Emergency Preparedness Inspector (Training)
Wade Loo, Senior Health Physicist
Mark Speck, Senior Technical Training Program Specialist

Approved by: Brian R. Bonser, Chief
Plant Support Branch 1
Division of Reactor Safety

Enclosure

SUMMARY

Inspection Report (IR) 05000335/2016502 and 05000389/2016502; 2/22/2016 – 2/26/2016; Saint Lucie, Units 1 and 2; Exercise and Baseline Inspection

This report covers an inspection by three emergency preparedness inspectors, one senior health physicist, and one senior technical training program specialist. No findings of significance were identified. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 5.

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 24, 2016, 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 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 25, 2016, 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. The inspectors also attended the FEMA-sponsored public meeting on February 26, 2016. This inspection activity satisfied one inspection sample for the exercise evaluation on a biennial basis.

b. Findings

No findings were identified.

EP4 Emergency Action Level and Emergency Plan Changes

a. Inspection Scope

Since the last NRC inspection of this program area, multiple revisions have been made to the Radiological Emergency Plan and its implementing procedures. The licensee determined that, in accordance with 10 CFR 50.54(q), the 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 Inspection Procedure (IP) 71114, Attachment 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 inspection activity, 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 valuation 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, 2015, through December 31, 2015. 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.

b. Findings

No findings were identified.

4OA6 Meetings

On February 25, 2016, the inspection team presented the inspection results to Mr. W. Parks 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

R. Baird, Training Manager
D. Cecchetti, Licensing Engineer
R. Coffey, Plant General Manager
J. Couture, Sr. Emergency Preparedness Coordinator
M. Jones, Engineering Director
E. Katzman, Licensing Manager
J. Moody, Emergency Preparedness Coordinator
W. Parks, Operations Director
R. Pitts, Maintenance Director
P. Polfleit, Corporate Emergency Preparedness Manager
R. Sandford, Emergency Preparedness Coordinator
C. Santos, Assistant Operations Manager – Work Management
M. Snyder, Nuclear Oversight Manager
T. Spillman, Assistant Operations Manager – Training
D. Taylor, Emergency Preparedness Manager
C. Workman, Security Manager

LIST OF DOCUMENTS REVIEWED

1EP1 Exercise Evaluation

Procedures

St. Lucie Plant Radiological Emergency Plan, Revision 64
EP-AA-101, Nuclear Division Drill and Exercise Program, Revision 1
EP-AA-101-1000, Nuclear Division Drill and Exercise Procedure, Revision 14
EP-AA-101-1000-10001, Nuclear Division Drill and Exercise Objectives and Demonstration
Criteria, Revision 4
EPIP-01, Classification of Emergencies, Revision 33
EPIP-02, Duties and Responsibilities of the Emergency Coordinator, Revision 40
EPIP-03, Emergency Response Organization Notification/Staff Augmentation, Revision 27
EPIP-04, Activation and Operation of the Technical Support Center, Revision 48
EPIP-05, Activation and Operation of the Operational Support Center, Revision 34
EPIP-06, Activation and Operation of the Emergency Operations Facility, Revision 44
EPIP-08, Offsite Notifications and Protective Action Recommendations, Revision 40
EPIP-10, Off-site Radiological Monitoring, Revision 18
EPIP-13, Maintaining Emergency Preparedness - Emergency Exercises, Drills, Tests and
Evaluations, Revision 22
EPIP-14, Dose Assessment Using the Unified RASCAL Interface, Revision 3
EPIP-202, Duties and Responsibilities of the Emergency Coordinator, Revision 40
RP-SL-102-2005, Environmental Monitoring During Emergencies, Revision 1
2-AOP-09.02, Auxiliary Feedwater System, Revision 6
2-EOP-04, Steam Generator Tube Rupture, Revision 31
2-EOP-15, Functional Recovery, Revision 44

2-OSP-100.18, Surveillance Requirements for Shutdown Margin – Modes 3, 4, or 5
(Subcritical), Revision 2

Records and Data

FPL, St. Lucie Nuclear Plant, February 24, 2016, Emergency Drill, Review of the 2/24/2016
Exercise Presentation

St. Lucie Nuclear Plant, 2016 Emergency Preparedness, Evaluated Exercise, 2/24/2016
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)

2-OSP-100.18, Surveillance Requirements for Shutdown Margin – Modes 3, 4, or 5
(Subcritical), Revision 2, dated 2/24/2016

Corrective Action Program Documents (Action Requests)

AR 2112875, 2016 PSL emergency exercise pager activation not timely
AR 2112876, 2016 EP graded exercise – radiation protection tech simulation
AR 2112877, 2016 EP exercise simulator critique roll up
AR 2112878, 2016 EP graded exercise – 2B emergency diesel generator scenario detail
AR 2112879, 2016 PSL EP exercise drill expectations for non-participants
AR 2112880, 2016 EP graded exercise – OSC critique roll up
AR 2112884, EPIP-05 activation & operation of the OSC
AR 2112892, 2016 PSL EP exercise NRC ENS phone line complications
AR 2112894, 2016 PSL EP exercise scenario PAR upgrade not expected
AR 2112895, 2016 EP exercise unplanned automatic reactor trip
AR 2112936, EOF activation delayed
AR 2113005, Emergency Coordinator briefing sheet revision needed
AR 2113006, OSC facility activation command & control
AR 2113007, Operations improvement items
AR 2113019, Scenario improvement items
AR 2113024, JIC procedures
AR 2113039, Player on controller channel
AR 2113051, ERDS displayed values questioned during exercise
AR 2113058, TSC supervisor needed prompting
AR 2113840, TSC critique roll up
AR 2114028, NRC RSCL TSC phone line OOS
AR 2114415, NRC comments from EP inspection

1EP4 Emergency Action Level and Emergency Plan Changes

Procedures

St. Lucie Plant Radiological Emergency Plan, Revision 64
EN-AA-203-1201, 10 CFR Applicability and 10 CFR 50.59 Screening Reviews, Revision 7
EP-AA-100-1007, Evaluation of Changes to the Emergency Plan, Supporting Documents and
Equipment [10 CFR 50.54(Q)], Revision 3
EPG-01, Emergency Preparedness Assessment & Performance Monitoring, Revision 18
EPG-03, Review & Revision of Emergency Preparedness Documents, Revision 22
EPIP-14, Dose Assessment Using the Unified RASCAL Interface, Revision 3
Plant St. Lucie Radiation Monitor Design Basis Document
Radiation Monitor EAL Value Determination, Revision 1

Emergency Action Levels - Hot Basis, Revision 2
 Emergency Action Levels - Cold Basis, Revision 2

Change Packages

- 10 CFR 50.54(q) Screening Form for St. Lucie (STL) Plant Radiological Emergency Plan (REP) Revision 61, dated 2/13/2013
- 10 CFR 50.54(q) Screening Form for STL Plant REP Revision 62, dated 4/2/2014
- 10 CFR 50.54(q) Evaluation Form for STL Plant REP Revision 62, dated 4/2/2014
- 10 CFR 50.54(q) Screening Form for Unit 1 Fuel Handling Building Stack Radiation Monitor, dated 6/24/2014
- 10 CFR 50.54(q) Evaluation Form for Unit 1 Fuel Handling Building Stack Radiation Monitor, dated 6/25/2014
- 10 CFR 50.54(q) Screening Form for Unit 1 Plant Vent Stack Radiation Monitor, dated 6/25/2014
- 10 CFR 50.54(q) Evaluation Form for Unit 1 Plant Vent Stack Radiation Monitor, dated 6/25/2014
- 10 CFR 50.54(q) Screening Form for Replacement of Nortel Phone System, dated 7/22/2014
- 10 CFR 50.54(q) Evaluation Form for Replacement of Nortel Phone System, dated 7/22/2014
- 10 CFR 50.54(q) Screening Form for Minor Administrative Changes to STL Plant REP, Revision 63, dated 9/9/2014
- 10 CFR 50.54(q) Screening Form for Unified RASCAL Interface Replacing Class 'A' Dose Assessment, dated 11/18/2014
- 10 CFR 50.54(q) Evaluation Form for Unified RASCAL Interface Replacing Class 'A' Dose Assessment, dated 11/24/2014
- 10 CFR 50.54(q) Evaluation Form for PAR Scheme Changes in NUREG-0654, Supplement 3, dated 11/24/2014
- 10 CFR 50.54 (q) Screening Form for Change to the E-Plan Revision 64, dated 11/3/2015
- 10 CFR 50.54 (q) Evaluation Form for Change to the E-Plan Revision 64, dated 11/3/2015
- 10 CFR 50.54(q) Screening Form for Change to EPIP-14 Revision 21, dated 12/21/2015
- 10 CFR 50.54(q) Evaluation Form for Change to EPIP-14 Revision 21, dated 12/21/2015

Corrective Action Program Documents

AR 1929433, Emergency Plan Revision Input
 AR 1863110, High Water Level Events

1EP8 Exercise Evaluation

Procedures

EP-AA-101, Nuclear Division Drill and Exercise Program, Revision 1
 EP-AA-101-1000, Nuclear Division Drill and Exercise Procedure, Revision 14
 EP-AA-101-1000-10001, Nuclear Division Drill and Exercise Objectives and Demonstration Criteria, Revision 4

Records and Data

St. Lucie Nuclear Plant, 2016 Emergency Preparedness, Evaluated Exercise,
 February 24, 2016

40A1 Performance Indicator Verification

Procedures

ADM-25.02, NRC Performance Indicators, Revision 34

EPG-01, Emergency Preparedness Assessment and Performance Monitoring, Revision 17
 EPIP-01, Classification of Emergencies, Revision 25
 EPIP-02, Duties and Responsibilities of the Emergency Coordinator, Revision 39, 1/10/2014
 EPIP-04, Activation of the Technical Support Center, Revision 46, 9/25/2014
 EPIP-08, Off-Site Notifications and Protective Action Recommendations, Revision 36
 PI-AA-104-1000, Corrective Action, Revision 6

Records and Data

DEP opportunities documentation for first, second, third, and fourth Quarters 2015
 Siren test data for first, second, third, and fourth Quarters 2015
 Drill and exercise participation records of ERO personnel for first, second, third, and fourth Quarters 2015

Corrective Action Program Documents

AR 1942048, Siren S-53 failed its biweekly test
 AR 1995490, Siren S-75 failed its biweekly test
 AR 2006485, Siren S-53 failed its biweekly test
 AR 2028511, Potential missed DEP opportunity
 AR 2036079, Apparent Cause Evaluation for missed DEP opportunity
 AR 2036547, Failed PI for inaccurate State Notification Form
 AR 2060034, Potential missed DEP opportunity during licensed operator continuing training
 AR 2070200, Third Quarter emergency drill simulator critique items
 AR 2070285, PSL third Quarter EP drill scenario varied from expected
 AR 2071594, Plant St. Lucie third Quarter EP DEP failure
 AR 2074672, Siren S-59 failed its biweekly test
 AR 2084882, LMS training record mistake led to EP NRC PI inaccuracy 3Q15
 AR 2091063, Siren S-29 failed its biweekly test
 AR 2097356, Plant St. Lucie fourth Quarter EP drill evaluation of Alert declaration

LIST OF ACRONYMS USED

ANS	Alert and Notification System
DEP	Drill and Exercise Performance
DHS	Department of Homeland Security
ERO	Emergency Response Organization
FEMA	Federal Emergency Management Agency
IP	Inspection Procedure
PIs	Performance Indicators