



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

June 25, 2013

EA-13-137

Mr. Mano Nazar
Executive Vice President
and Chief Nuclear Officer
Florida Power and Light Company
P.O. Box 14000
Juno Beach, FL 33408-0420

**SUBJECT: ST. LUCIE NUCLEAR PLANT - NRC TRIENNIAL FIRE PROTECTION
INSPECTION REPORT 05000335/2013007 AND 05000389/2013007 AND
EXERCISE OF ENFORCEMENT DISCRETION**

Dear Mr. Nazar:

On March 29, 2013, The U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your St. Lucie Nuclear Plant, Units 1 and 2. The enclosed inspection report documents the inspection results, which were discussed with Mr. J. Jensen and other members of your staff on March 29, 2013. Following completion of additional post-inspection analysis of the inspection findings by the NRC in the Region II office, a final exit meeting was held by telephone with Mr. E. Katzman and other members of your staff on May 13, 2013, to provide an update on changes to the preliminary inspection findings.

The inspection examined activities conducted under your license as they related 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.

One NRC-identified finding of very low safety significance (Green) was identified during this inspection. This finding was determined to involve a violation of NRC requirements. Additionally, a licensee-identified violation which was determined to be of very low safety significance is listed in this report. However, because of the very low safety significance of these violations and because they were entered into your corrective action program, the NRC is treating these violations as non-cited violations (NCVs) consistent with Section 2.3.2 of the NRC Enforcement Policy. If you contest these NCVs, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the Nuclear Regulatory Commission, ATTN.: Document Control Desk, Washington DC 20555-001; with copies to the Regional Administrator Region II; the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC Resident Inspector at the St. Lucie Nuclear Plant.

If you disagree with a cross-cutting aspect assignment in this report, you should provide a response within 30 days of the date of this inspection report, with the basis for your disagreement, to the Regional Administrator, RII, and the NRC Senior Resident Inspector at the St. Lucie Nuclear Plant.

The enclosed report also documents two noncompliances for which the NRC is exercising enforcement discretion in accordance with Section 9.1 of the NRC Enforcement Policy, "Enforcement Discretion for Certain Fire Protection Issues (10 CFR 50.48)." The noncompliances involved a failure to maintain fire rated barrier separation having a minimum 3-hour rating or barriers which have been evaluated as being acceptable between fire areas. To address these noncompliances, you entered them into your corrective action program and implemented compensatory measures which included posting roving fire watches in the fire areas of concern. The NRC is not taking enforcement action for these noncompliances because they meet the criteria of the NRC's interim enforcement policy regarding enforcement discretion for certain fire protection issues. In these cases, the NRC concluded that: (1) Florida Power and Light entered the noncompliances into its corrective action program and implemented appropriate compensatory measures; (2) the noncompliances were not associated with findings that the reactor oversight process significance determination process would evaluate as Red; (3) the noncompliances were not willful; and (4) Florida Power and Light has committed to transition to 10 CFR 50.48(c), which includes approaches in National Fire Protection Association Standard 805-2001 Edition (NFPA 805). Based on the results of the NRC's inspection and assessment, I have been authorized to exercise enforcement discretion in accordance with the NRC Enforcement Policy, Section 9.1, "Enforcement Discretion for Certain Fire Protection Issues (10 CFR 50.48)," and refrain from issuing enforcement for these noncompliances. Furthermore, based on the corrective actions, and in accordance with NRC Inspection Manual Chapter 0305, "Operating Reactor Assessment Program," Section 11.05, "Treatment of Items Associated with Enforcement Discretion," subsection 11.05.b, the NRC will refrain from including the noncompliance in the Agency Action Matrix.

In accordance with 10 CFR 2.390 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 Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Website at

<http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

/RA/

Michael F. King, Chief
Engineering Branch 2
Division of Reactor Safety

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

Enclosure:
Inspection Report 05000335/2013007, 05000389/2013007
w/Attachment: Supplemental Information

cc: (See page 4)

<http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

/RA/

Michael F. King, Chief
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cc: (See page 4)

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DATE	6/17/2013	6/17/2013	6/17/2013	6/17/2013	6/25/2013	6/18/2013	6/18/2013
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Letter to Mano Nazar from Michael F. King dated June 25, 2013.

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INSPECTION REPORT 05000335/2013007 AND 05000389/2013007 AND
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U.S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket Nos: 50-335, 50-389

License Nos: DPR-67, NPF-16

Report Nos: 05000335/2013007, 05000389/2013007

Licensee: Florida Power & Light Company (FP&L)

Facility: St. Lucie Nuclear Plant, Units 1 & 2

Location: Jensen Beach, FL 34957

Dates: March 11-15, 2013 (Week 1)
March 25-29, 2013 (Week 2)

Inspectors: M. Thomas, Senior Reactor Inspector (Lead Inspector)
K. Ellis, Resident Inspector, Oconee
T. Fanelli, Construction Inspector
G. Wiseman, Senior Reactor Inspector

Accompanying Personnel: M. Singletary, Reactor Inspector (Training)

Approved by: Michael F. King, Chief
Engineering Branch 2
Division of Reactor Safety

Enclosure

SUMMARY OF FINDINGS

IR 05000335/2013007, 05000389/2013007; 03/11-15/2013 and 03/25-29/2013; St. Lucie Nuclear Plant, Units 1 and 2; Fire Protection (Triennial)

This report covers an announced two-week triennial fire protection inspection by a team of four regional inspectors and one inspector in training. One Green non-cited violation was identified. The significance of inspection findings is indicated by their color (i.e., greater than Green, or Green, White, Yellow, Red) and determined using Inspection Manual Chapter (IMC) 0609, Significance Determination Process, dated June 2, 2011. Cross-cutting aspects are determined using IMC 0310, "Components Within the Cross-Cutting Areas," dated October 28, 2011. All violations of NRC requirements are dispositioned in accordance with the NRC's Enforcement Policy dated January 28, 2013. Findings for which the SDP does not apply may be Green or be assigned a severity level after U.S. Nuclear Regulatory Commission (NRC) management review. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process" Rev. 4, dated December 2006.

A. NRC-Identified and Self-Revealing Findings

Cornerstone: Mitigating Systems

- Green. An NRC-identified non-cited violation of St. Lucie Unit 1 and Unit 2 operating license conditions 3.E was identified for the licensee's failure to comply with the requirements of the St. Lucie Fire Protection Program for verifying the feasibility of unapproved operator manual actions (OMAs). Specifically, the licensee's process for determining OMA feasibility did not include performing in-plant walkdowns to verify the feasibility of all the unapproved OMAs that were entered in the corrective action program (CAP) in 2006 and designated as alternate compensatory measures during the transition to National Fire Protection Association (NFPA) Standard 805. The licensee entered this issue in their CAP as Action Request (AR) 01860866 and performed in-plant walkdowns to verify feasibility of the OMAs which had not been previously field verified.

Failure to comply with the requirements of the St. Lucie Fire Protection Program for verifying the feasibility of unapproved OMAs designated as compensatory measures is a performance deficiency. This finding was determined to be more than minor because it was associated with the reactor safety mitigating systems cornerstone attribute of protection against external events (i.e. fire), and it affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The licensee's process for determining OMA feasibility could have resulted in non-feasible OMA compensatory measures not being identified which had the potential to adversely affect SSD in the event of a fire. The finding was screened in accordance with NRC Inspection Manual Chapter (IMC) 0609, "Significance Determination Process (SDP)," Attachment 4, "Initial Characterization of Findings," which determined that an IMC 0609 Appendix F, "Fire Protection Significance Determination Process," review was required as the finding affected fire protection safe shutdown. The inspectors evaluated this finding using the guidance in IMC 0609, Appendix F, Attachment 2, "Degradation Rating Guidance," and assigned a low degradation rating to this finding because the licensee verified that the OMAs were feasible through in-plant walkdowns. Therefore, this finding was determined to be of very low safety significance (Green). The cause of this finding was determined

Enclosure

to have a cross-cutting aspect in the Corrective Action Program (CAP) component of the Problem Identification and Resolution area in that the licensee did not thoroughly evaluate the problem such that the resolution addressed extent of condition [P.1(c)]. (Section 1R05.10)

B. Licensee Identified Violations

A violation of very low safety significance that was identified by the licensee has been reviewed by the inspectors. Corrective actions taken or planned by the licensee have been entered into the licensee's corrective action program. The violation and corrective action tracking number is listed in Section 4OA7 of this report.

REPORT DETAILS

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity

1R05 Fire Protection

This report documents the results of a triennial fire protection inspection of the St. Lucie Nuclear Plant (PSL), Units 1 and 2. The inspection was conducted in accordance with the guidance provided in NRC Inspection Procedure (IP) 71111.05T, "Fire Protection (Triennial)," dated January 31, 2013. The objective of the inspection was to review a sample of three risk-significant fire areas (FAs) to evaluate implementation of the fire protection program (FPP) as described in Appendix 9.5A of the PSL Updated Final Safety Analysis Report (UFSAR), Fire Protection Program Report; Administrative Procedure (AP) 1800022, Fire Protection Plan; Unit 1 Appendix R Safe Shutdown Analysis (8770-B-048); and to review site specific implementation of one mitigating strategy from Section B.5.b of NRC Order EA-02-026, "Order for Interim Safeguards and Security Compensatory Measures" (commonly referred to as B.5.b), as well as the storage, maintenance, and testing of B.5.b mitigating equipment. The sample FAs were chosen based on a review of available risk information as analyzed by a senior reactor analyst from Region II, a review of previous inspection results, plant walkdowns of FAs, consideration of relational characteristics of combustible material to targets, and location of equipment needed to achieve and maintain safe shutdown (SSD) of the reactor. In selecting a B.5.b mitigating strategy sample, the inspectors reviewed licensee submittal letters, safety evaluation reports (SERs), licensee commitments, B.5.b implementing procedures, and previous NRC inspection reports (IRs). Section 71111.05-05 of the IP specifies a minimum sample size of three FAs/Fire Zones (FZs) and one B.5.b mitigating strategy for addressing large fires and explosions. This inspection fulfilled the requirements of the procedure by selecting a sample of three FAs and one B.5.b mitigating strategy. The FAs/FZs chosen were identified as follows:

1. Unit 1 Fire Area A, FZ 44A ("A" Cable Loft Enclosure; FZ 59 (1A Battery Room); FZ 60 ("A" Switchgear Room); FZ 77 ("A" Electrical Penetration Room East)
2. Unit 1 Fire Area E, FZ 47 ("AB" Switchgear Room)
3. Unit 1 Fire Area F, FZ 70 (Unit 1 Main Control Room)

For each of the selected FAs/FZs, the inspectors evaluated the licensee's FPP against applicable NRC requirements and licensee design basis documents. Applicable design basis documents reviewed by the inspectors are listed in the Attachment to this report.

.01 Protection of Safe Shutdown Capabilities

a. Inspection Scope

For the selected FAs/FZs, the inspectors performed in-plant walkdowns to observe: (1) the material condition of fire protection systems and equipment; (2) the storage of permanent and transient combustibles; (3) the proximity of fire hazards to cables relied upon for SSD; and (4) the licensee's implementation of procedures and processes for

limiting fire hazards, housekeeping practices, and compensatory measures for inoperable or degraded fire protection systems and credited fire barriers.

Cable routing information by FA was reviewed for a selected sample of SSD components to verify that the associated cables would not be damaged by a fire in the selected fire areas or the licensee's analysis determined that the fire damage would not prohibit safe plant shutdown. The inspectors reviewed conduit and cable tray layout drawings, as well as field walkdowns of the cable routing to confirm that at least one train of redundant cables routed in the FA were adequately protected from fire damage. The inspectors reviewed the PSL safe shutdown analysis (SSA) for the selected FAs/FZs and compared it to the off-normal operating procedures (ONPs) to verify that cables and equipment credited for post-fire SSD in the SSA and applicable procedures were adequately protected from fire damage in accordance with the requirements of 10 CFR 50, Appendix R, Section III.G, "Fire Protection of Safe Shutdown Capability." In cases where local operator manual actions (OMAs) were credited in lieu of cable protection of SSD equipment, the inspectors reviewed the OMAs to verify that the OMAs were feasible utilizing the guidance of NRC IP 71111.05T, paragraph 02.02.j.2. A list of SSD components examined for cable routing is included in the Attachment.

b. Findings

No findings were identified.

.02 Passive Fire Protection

a. Inspection Scope

The inspectors observed the material condition and as-built configurations of accessible fire barriers surrounding the FAs/FZs selected for review to evaluate the adequacy of the fire resistance in accordance with the requirements of the PSL Procedure AP-1800022 and Appendix A of NRC Branch Technical Position (BTP) APCSB 9.5-1. Fire barriers reviewed included reinforced concrete walls/floors/ceilings, masonry block walls, Thermo-Lag 330-1 walls, mechanical and electrical penetration seals, fire doors, and fire dampers. Construction detail drawings were reviewed as necessary. Where applicable, the inspectors observed the installed barrier assemblies and compared the as-built configurations to the approved construction details; supporting fire endurance test data; licensing basis commitments; and standard industry practices. The inspectors reviewed barrier configurations to verify they were either properly evaluated or qualified by appropriate fire endurance tests.

The inspectors also reviewed fire loading calculations and interior finish products fire data to verify that the potential exposure fire severity and fire duration used by the licensee was appropriate for determining the fire resistive rating of the fire barriers. The overall criterion applied to this element of the inspection was that the passive fire barriers had the capability to contain fires for one hour or three hours as applicable. Also, a sample of completed surveillance and maintenance procedures for selected fire walls, fire doors, fire dampers, and penetration seals were reviewed to ensure that these passive fire barriers were being properly inspected and maintained. The fire protection features included in the review are listed in the Attachment.

b. Findings

No findings were identified.

.03 Active Fire Protection

a. Inspection Scope

The inspectors reviewed the redundancy of fire protection water sources and fire pumps to confirm they were installed in accordance with the codes of record to satisfy the applicable separation, design requirements, and licensing basis requirements of the PSL Fire Protection Plan and Appendix A of BTP APCSB 9.5-1. The inspectors performed in-plant observations of the material condition and operational lineup for the operation of the fire water pumps and fire protection water supply distribution piping including, manual fire hose and standpipe systems for the selected FA/FZs. Using operating and valve cycle/alignment procedures as well as engineering drawings, the inspectors examined the electric motor-driven fire pumps and accessible portions of the fire main piping system to evaluate operational status, consistency of as-built configurations with engineering drawings, and to verify correct system valve lineups (i.e. position of valves). The inspectors also examined portions of the licensee's SSA and select electrical circuit routing drawings outlining the fire water pumps' power and pressure start capability to verify that the fire water system would be available to support fire brigade response activities during power block fire events.

The inspectors compared the fire detection and fire suppression systems for the selected FAs/FZs to the applicable National Fire Protection Association (NFPA) Standard(s) by reviewing design documents and observing their as-installed configurations as part of performing the in-plant walkdowns. The inspectors reviewed selected fire protection vendor equipment specifications, drawings, and engineering calculations to determine whether the fire detection and suppression methods were appropriate for the types of fire hazards that existed in the selected FAs/FZs. During plant walkdowns, the inspectors observed the placement of the fire hose stations, fire extinguishers, fire hose nozzle types, and fire hose lengths, as designated in the fire fighting pre-plan strategies, to verify they were not blocked and adequate reach and coverage was provided consistent with the firefighting strategies and Fire Protection Plan documents. The inspectors reviewed completed periodic surveillance testing and maintenance program procedures for the fire detection and suppression systems and compared them to the operability, testing, and compensatory measures requirements of procedure AP-1800022, Appendix A. This review was to assess whether the test program was sufficient to validate proper operation of the fire detection and suppression systems in accordance with their design requirements.

Aspects of fire brigade readiness were reviewed, including but not limited to, the fire brigade's personal protective equipment, self-contained breathing apparatuses (SCBAs), portable communications equipment, and other fire brigade equipment to determine accessibility, material condition and operational readiness of equipment. During plant walkdowns, the inspectors compared firefighting pre-plan strategies to existing plant layout and equipment configurations and to fire response ONPs for the selected FAs/FZs. This was done to verify that firefighting pre-fire plan instructions and drawings were consistent with the fire protection features and potential fire conditions within the area and also to determine if appropriate information was provided to fire brigade

members to facilitate suppression of an exposure fire that could impact the SSD strategy.

b. Findings

No findings were identified.

04. Protection From Damage From Fire Suppression Activities

a. Inspection Scope

The inspectors evaluated whether water-based manual firefighting activities could adversely affect equipment credited for SSD, inhibit access to alternate shutdown equipment, or adversely affect local OMAs required for SSD in the selected FAs/FZs. The inspectors reviewed available documentation related to flooding analysis from fire protection activities as well as potential flooding through unsealed concrete floor cracks. Fire fighting pre-plan strategies; fire brigade training procedures; heating, ventilation and air conditioning (HVAC) drawings; and fire response procedures were also reviewed to verify that inter-area migration of water or ventilation of gaseous heat and smoke was addressed and would not adversely affect SSD equipment or the performance of OMAs.

b. Findings

No findings were identified.

.05 Alternative Shutdown Capability

a. Inspection Scope

Methodology

For a postulated fire in FZ 70 (Unit 1 main control room (MCR)) the licensee credited alternative shutdown capability (the capability to achieve SSD outside the MCR, a requirement for areas where redundant trains of equipment required for hot shutdown were located in the same FA and may be subject to damage from a single fire, from fire suppression activities, or from the rupture or inadvertent operation of fire suppression systems). The inspectors reviewed UFSAR Appendix 9.5A and corresponding procedures to ensure that appropriate controls provided reasonable assurance that alternative shutdown equipment remained operable, available, and accessible when required. The inspectors reviewed a sample of electrical elementary diagrams outlining the control transfer capability to verify that the system would function to electrically isolate from the MCR. The inspectors interviewed licensee personnel to verify that surveillance testing adequately demonstrated operability of the transfer capability of the system. In cases where local OMAs were credited in lieu of cable protection of SSD components, the inspectors performed a walk-through of the procedures to verify that the OMAs were feasible. Reviews also included verification that alternative shutdown could be accomplished with or without offsite power.

Operational Implementation

The inspectors reviewed selected training materials for licensed and non-licensed operators to verify the training reinforced the shutdown methodology in the PSL Unit 1 SSA fire area report for FZ 70. The inspectors also reviewed shift turnover logs and shift manning to verify that personnel required for SSD using alternative shutdown systems and procedures were available onsite, exclusive of those assigned as fire brigade members.

The inspectors performed a walk-through of procedure steps with operations personnel to assess the implementation and human factors adequacy of the procedures and shutdown strategy, evaluate the expected ambient conditions, relative difficulty and operator familiarization associated with each OMA. The inspectors reviewed the systems and components credited for use during this shutdown method to verify that they would remain free from fire damage. The inspectors reviewed selected operator actions to verify that the operators could reasonably be expected to perform the specific actions within the time required to maintain plant parameters within specified limits.

b. Findings

No findings were identified.

.06 Circuit Analyses

a. Inspection Scope

The inspectors reviewed the licensee's UFSAR Appendix 9.5A, PSL Unit 1 SSA, system flow diagrams, FPP implementing procedures, and applicable information to gain an understanding of the licensee's SSD strategy. The inspectors reviewed credited components specified in the SSA essential equipment list for meeting the SSD function. The inspectors reviewed cable routing information for credited components to determine if these components would be impacted by a fire within the chosen FAs/FZs. Additionally, a review was conducted of routing information for credited active fire protection components (i.e., electric motor-driven fire water pumps, and HVAC system controls) to determine if a fire in the selected FAs/FZs would impact them and the credited defense-in-depth systems. The circuitry associated with the electric motor-driven fire pumps controls and automatic functions was reviewed to determine if the desired start logic would function as designed and would not be vulnerable to fire damage. In instances where questions arose regarding potential fire induced circuit failures to cables, the inspectors performed a more detailed review by evaluating the credited resolution. The inspectors reviewed the licensee's evaluations for spurious circuit failure scenarios (single and/or multiple) specified in the circuit analysis to determine if the sample list of components challenged the assumptions made in the SSA. The inspectors reviewed the licensee's electrical coordination study to determine if power supplies were susceptible to fire damage, which would potentially affect the credited components for the FAs/FZs chosen for review. The specific components reviewed are listed in the Attachment.

b. Findings

No findings were identified.

.07 Communications

a. Inspection Scope

The inspectors reviewed the communication capabilities required to support plant personnel in the performance of OMAs to achieve and maintain SSD, as credited in the PSL UFSAR, Appendix 9.5A, Section 3.8. The inspectors verified that portable radio communications and fixed emergency communication systems were available, operable, and adequate for the performance of designated activities. The inspectors also verified that the design and location of communications equipment, such as repeaters and transmitters, would not cause a loss of communications during a fire. The inspectors also walked down sections of the post-fire SSD procedures to verify that adequate communications equipment would be available to support SSD. In addition, the inspectors reviewed the periodic testing of the site fire alarm and the maintenance checklists for the sound powered phones to verify proper operation of the systems.

b. Findings

No findings were identified.

.08 Emergency Lighting

a. Inspection Scope

The inspectors reviewed maintenance and design aspects of the fixed 8-hour battery pack emergency lighting units (ELUs) required by 10 CFR 50 Appendix R, Section III.J and the licensee's approved FPP. The inspectors performed plant walkdowns of the post-fire SSD procedures for the selected FAs/FZs to observe the placement and coverage area of the ELUs throughout the selected FAs/FZs. The inspectors also evaluated the adequacy of the ELUs to illuminate access and egress pathways, and any equipment requiring local operation and/or instrumentation monitoring for post-fire SSD. The inspectors reviewed completed surveillance and maintenance tests to verify that adequate surveillance testing was in place. The manufacturer's information and vendor manuals for the fixed and portable 8-hour battery pack ELUs were reviewed to verify that the battery power supplies were rated with at least an 8-hour capacity as described in UFSAR Appendix 9.5A, Section 3.7.

b. Findings

No findings were identified.

.09 Cold Shutdown Repairs

a. Inspection Scope

The inspectors interviewed licensee personnel and reviewed both the UFSAR Appendix 9.5A and the SSA to verify that the licensee had evaluated the need for cold shutdown repairs. The inspectors determined that the licensee did not take credit for repairs to cold shutdown components in order to achieve cold shutdown.

b. Findings

No findings were identified.

.10 Compensatory Measures

a. Inspection Scope

(1) Compensatory Measures for Degraded Fire Protection Components

The inspectors reviewed the administrative controls for out-of-service, degraded and/or inoperable fire protection features (e.g. detection and suppression systems and passive fire barriers) to verify that short-term compensatory measures adequately compensated for the degraded function or feature until appropriate corrective actions could be taken.

(2) Manual Actions as Compensatory Measures for Safe Shutdown

The PSL post-fire SSD methodology utilized OMAs to address fire-induced circuit failures which could prevent operation or cause maloperation of equipment needed to achieve and maintain post-fire SSD. The NRC published guidance in the *Federal Register* (71 FR 11169), dated March 6, 2006, which stated that OMAs are acceptable as compensatory measures (as long as the OMAs are feasible) while corrective actions were being taken by licensees to restore compliance. In the case of PSL, the corrective actions to restore compliance involved adoption of NFPA 805 through 10 CFR 50.48(c). The inspectors used the guidance in IP 71111.05T, paragraph 02.02.j.2, to assess whether the licensee had established feasible OMAs as compensatory measures in Unit 1 procedure 1-ONP-100.01, Response to Fire, and Unit 2 procedure 2-ONP-100.01, Response to Fire, for the applicable FAs.

b. Findings

Introduction: An NRC-identified Green non-cited violation (NCV) of St. Lucie Unit 1 and Unit 2 operating license conditions (OLCs) 3.E was identified for the licensee's failure to comply with the requirements of the St. Lucie FPP for verifying the feasibility of OMAs designated as alternate compensatory measures. Specifically, the licensee did not perform in-plant walkdowns to verify the feasibility of all the OMAs that were entered into the corrective action program (CAP) in 2006 and designated as alternate compensatory measures during the transition to NFPA 805. The licensee entered this issue into their CAP as Action Request (AR) 01860866 and performed in-plant walkdowns to verify feasibility of the OMAs which had not been previously field verified.

Description: The inspectors reviewed AR 01701818 and its associated apparent cause evaluation (ACE), which documented an Appendix R SSD issue in the PSL CAP related to OMA feasibility due to the licensee's inability to perform time critical OMAs within the times specified in the PSL SSA. This issue was identified by the licensee during simulator training while using Unit 2 procedure 2-ONP-100.01, Response to Fire. The AR stated that this OMA feasibility issue was applicable to Unit 1 and Unit 2 FAs. The OMAs were designated as alternate compensatory measures in the licensee's CAP (AR 00431798/CR 2006-20062) and in the fire protection program implementing administrative procedure AP-1800022, Fire Protection Plan while PSL restored compliance with NRC regulations by transitioning their fire protection licensing basis to

NFPA 805, in accordance with 10 CFR 50.48(c). The licensee performed OMA feasibility reviews in 2003 for Unit 2 and 2006 for Unit 1. These feasibility reviews included in-plant walkdowns of the time critical OMAs for three FAs on each unit. The three FAs reviewed for each unit represented the worst case FAs with respect to the number of OMAs and provided the bases for the licensee's conclusion that all the OMAs documented in AR 00431798/CR 2006-20062 were feasible and adequate as alternate compensatory measures. Subsequent to the 2006 OMA feasibility review, the licensee performed additional OMA feasibility reviews and in-plant walkdowns in support of the licensee's March 2013 NFPA 805 license amendment request submittal. The inspectors noted that the scope of these additional OMA feasibility reviews did not include all the OMAs documented in AR 00431798/CR 2006-20062 as alternate compensatory measures. Procedure AP-1800022 stated that post-fire OMAs may be used as alternate compensatory measures for compliance with NRC regulations provided the OMAs had been reviewed in accordance with NRC Regulatory Issue Summary (RIS) 2005-07, "Compensatory Measures to Satisfy the Fire Protection Program Requirements." The RIS stated that risk insights as well as other considerations (such as OMA feasibility) be used to determine if OMAs were adequate as alternate compensatory measures. The inspectors determined that the licensee's OMA feasibility reviews were limited in scope and did not comply with the requirements of procedure AP-1800022 because the OMAs which had not been previously field verified for feasibility had not been reviewed in accordance with RIS 2005-07 to determine their adequacy as alternate compensatory measures. Subsequent to the inspectors questioning the scope of the previous OMA feasibility reviews, the licensee entered this issue into the CAP as AR 01860866 and performed in-plant walkdowns to verify feasibility of the OMAs which had not been previously field verified. The OMAs were determined to be feasible prior to the inspectors leaving the site on March 29, 2013. The licensee also initiated AR 01857289 to document weaknesses related to the initial followup response to AR 01701818 and the associated ACE.

Analysis: Failure to comply with the requirements of the St. Lucie Fire Protection Program for verifying the feasibility of unapproved OMAs designated as compensatory measures is a performance deficiency. This finding was determined to be more than minor because it was associated with the reactor safety mitigating systems cornerstone attribute of protection against external events (i.e. fire), and it affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The finding had the potential for non-feasible OMAs to go undetected which could adversely affect SSD in the event of a fire. The finding was screened in accordance with NRC Inspection Manual Chapter (IMC) 0609, "Significance Determination Process (SDP)," dated June 2, 2011, Attachment 4, "Initial Characterization of Findings," dated June 19, 2012, which determined that an IMC 0609 Appendix F, "Fire Protection Significance Determination Process," dated February 28, 2005, review was required as the finding affected fire protection safe shutdown. The inspectors evaluated this finding using the guidance in IMC 0609, Appendix F, Attachment 2, "Degradation Rating Guidance," and assigned a low degradation rating to this finding because the OMAs which had not been previously field verified were subsequently determined to be feasible through in-plant walkdowns. Therefore, this finding was determined to be of very low safety significance (Green). The cause of this finding was determined to have a cross-cutting aspect in the Corrective Action Program (CAP) component of the Problem Identification and Resolution area in that the licensee did not thoroughly evaluate the problem such that the resolution addressed extent of condition [P.1(c)].

Enforcement: St. Lucie Unit 1 and Unit 2 Renewed OLCs 3.E, state in part that the licensee shall implement and maintain in effect all provisions of the approved fire protection program as described in the UFSAR (and supplemented by various FPL submittals dated July 14, 1982 to February 21, 1985) and as approved by various NRC Safety Evaluation Reports. The approved fire protection program is maintained and documented in UFSAR Appendix 9.5A, Fire Protection Program Report, for each unit. Section 7.7 of Unit 1 UFSAR Appendix 9.5A and Section 7.6 of Unit 2 UFSAR Appendix 9.5A stated that compensatory measures required in the event of fire protection system or equipment impairments were described in the Fire Protection Plan. Procedure AP-1800022, Fire Protection Plan, required that post-fire OMAs used as alternate compensatory measures for compliance with NRC regulations be reviewed in accordance with NRC Regulatory Issue Summary (RIS) 2005-07, "Compensatory Measures to Satisfy the Fire Protection Program Requirements." The RIS required an evaluation be performed of the impact and adequacy of the alternate compensatory measure. The evaluation must demonstrate that the alternate compensatory measure (e.g., an OMA) would not adversely affect the ability to achieve and maintain SSD.

Contrary to the above requirements, on March 29, 2013, the inspectors determined that the licensee failed to meet the requirements of PSL renewed OLCs 3.E and the approved FPP for PSL Units 1 and 2. Specifically, inspectors concluded the licensee failed to comply with procedure AP-1800022 in that all OMAs had not been previously field verified for feasibility to demonstrate the adequacy of the OMAs as alternate compensatory measures. This violation has existed since July 2006. Because of very low safety significance, this violation is being treated as an NCV, consistent with Section 2.3.2 of the NRC Enforcement Policy. The violation was entered into the licensee's CAP as AR 01860866. NCV 05000335, 389/2013007-01, Failure to Demonstrate Feasibility of All OMAs Used as Compensatory Measures.

.11 Review and Documentation of Fire Protection Program Changes

a. Inspection scope

The inspectors reviewed a sample of FPP changes made between March 2009 and January 2013 to assess the licensee's effectiveness and to determine if the changes to the FPP were in accordance with the fire protection license condition and had no adverse effect on the ability to achieve SSD.

b. Findings

No findings were identified.

.12 Control of Combustibles and Ignition Sources

a. Inspection Scope

The inspectors conducted tours of numerous plant areas that were important to reactor safety, including the selected FAs/FZs, to verify the licensee's implementation of FPP requirements as described in the PSL Fire Protection Plan and administrative procedure AP-0019434, "Fire Protection Guidelines." For the selected FAs/FZs, the inspectors evaluated generic fire protection training; fire event history; the potential for fires or

explosions; the combustible fire load characteristics; and, the potential exposure fire severity to determine if adequate controls were in place to maintain general housekeeping consistent with the UFSAR, administrative procedures, and other FPP procedures. The inspectors verified that containers with combustibles were being properly stored in flammable liquids storage cabinets which were Underwriters Laboratories (UL) or Factory Mutual (FM) listed. There were no hot work activities ongoing within the selected fire areas during the inspection and observation of this activity could not be performed.

b. Findings

No findings were identified.

.13 B.5.b Inspection Activities

a. Inspection Scope

The inspectors reviewed, on a sample basis, the licensee's spent fuel pool (SFP) external makeup mitigation measures for large fires and explosions to verify that the measures were feasible, personnel were trained to implement the strategy, and equipment was properly staged and maintained. The inspectors requested and reviewed inventory and maintenance records of required equipment. Through discussions with plant staff, review of documentation, and plant walkdowns, the inspectors verified the engineering basis to establish reasonable assurance that the makeup capacity could be provided using the specified equipment and water sources. The inspectors reviewed the licensee's capability to provide a reliable and available water source and the ability to provide the minimum fuel supply to the portable pumping equipment. The inspectors performed a walkdown of the storage and staging areas for the B.5.b equipment to verify that equipment identified for use in the current procedures were available, calibrated and maintained. In the presence of licensee staff, the inspectors conducted an independent audit and inventory of required equipment and a visual inspection of the dedicated credited power and water sources. The inspectors reviewed training materials and training records of the licensee's staff to verify that operator training/familiarity with the strategy objectives and implementing guidelines were accomplished according to the established training procedures. The inspectors verified, by review of records and physical inspection, that B.5.b equipment was currently being properly stored, maintained, and tested in accordance with the licensee's B.5.b program procedures.

b. Findings

No findings were identified.

4. OTHER ACTIVITIES

4OA2 Problem Identification and Resolution

a. Inspection Scope

The inspectors reviewed recent independent licensee audits for thoroughness, completeness and conformance to FPP requirements. Requirements for the

independent audits are contained in Regulatory Guide 1.189, "Fire Protection for Operating Nuclear Power Plants," Generic Letter 82-21, "Technical Specifications for Fire Protection Audits," and the licensee's Nuclear Quality Assurance Plan. Audits of the fire protection program reviewed were SAR 001946, dated July 12, 2012; and SAR 001720, dated August 29, 2012.

The inspectors also reviewed CAP documents, including completed corrective actions documented in selected ARs and operating experience program documents, to ascertain whether industry identified fire protection issues (actual or potential) affecting PSL were appropriately entered into the corrective action program for resolution. Items included in the operating experience program effectiveness review were NRC Information Notices, industry or vendor generated reports of defects and non-compliances submitted pursuant to 10 CFR Part 21, and vendor information letters. The inspectors evaluated the effectiveness of the corrective actions for the identified issues. The documents reviewed are listed in the Attachment.

b. Findings

No findings were identified.

4OA3 Follow-Up of Events and Notices of Enforcement Discretion

.01 (Closed) Licensee Event Report (LER) 05000335, 389/2006-005-00 and 01: Internal Conduit Seals Outside Appendix R Requirements

a. Inspection Scope

On January 27, 2011, the licensee submitted a supplement to their previous LER 2006-005-00 dated February 9, 2007, documenting the identification of degraded penetration seal configurations used for internal steel conduit penetration seals that penetrate fire-rated barriers. The internal conduit seal is a fire seal and also serves as smoke/hot gas barrier. The licensee concluded that these fire barriers, which are required for separation of 27 fire areas (both units) containing systems, components, and equipment required for fire safe shutdown were in a degraded condition. These fire seal inadequacies could affect the fire barriers' capability to provide the required 3-hours of fire resistance in the case of a postulated fire.

The Region II fire protection inspectors performed a detailed review of the information related to the LER. The inspectors performed in-office reviews of the licensee's test documents and analyses, performed onsite walk-downs, and discussed the event with plant personnel to verify the qualification of internal steel conduit penetration seals installed in the plant. The inspectors assessed the licensee's compensatory measures and corrective actions to ensure that they adequately restored compliance. The inspectors also evaluated the significance of degraded fire barriers that contained conduit configurations that did not meet the acceptance criteria of the qualification tests.

The following finding that affected 10 CFR 50.48 was identified by the licensee and is a violation of NRC requirements. This finding has been screened and determined to warrant enforcement discretion per the Interim Enforcement Policy Regarding Enforcement Discretion for Certain Fire Protection Issues (10 CFR 50.48). This LER is closed.

b. Findings

Introduction: A licensee-identified noncompliance of Unit 1 and Unit 2 OLCs 3.E., "Fire Protection," was identified for the failure to maintain rated fire barrier separation between FAs containing redundant safe shutdown trains by either barriers of a minimum of 3-hour rating or barriers that have been evaluated as acceptable. Specifically, during the course of fire barrier walk downs conducted October 17, 2007, to 2011, the licensee identified internal steel conduit penetration seals which were degraded, missing, and not bounded by fire testing in accordance with 3-hour fire rating design details.

Description: Penetration seal criteria established in BTP APCS 9.5-1 states, in part, that penetrations through fire barriers, including conduits and piping, be sealed or closed to provide a fire resistance rating at least equal to that of the barrier itself. During engineering reviews in 2006, the licensee concluded that these fire barriers, which are required for separation of redundant safe shutdown trains, were in a degraded condition. During the 2009 TFPI Inspection, dated June 10, 2009, NRC inspectors reviewed the status of the original LER 2006-005-00. At that time, the licensee had performed a comprehensive field walk-down to document the as-built configuration/condition of the seals and had a fire test conducted to determine the performance of various seal configurations. The fire test demonstrated the viability of the stations penetration seal designs. In subsequent plant walk downs, the licensee identified numerous seals in internal steel conduits that penetrate FA barriers of both Units 1 and 2 which were not properly fire sealed to provide a minimum of three-hours rating.

Analysis: The licensee's failure to provide fire seals in internal steel conduits that penetrate FA barriers of both Units 1 and 2 which were qualified to provide the required 3-hours of fire resistance, as required by their approved fire protection program, is a performance deficiency. The finding is more than minor because it is associated with the Reactor Safety Mitigating Systems cornerstone attribute of protection against external factors (i.e., fire) and it affects the cornerstone objective of ensuring the reliability and capability of systems that respond to initiating events. Specifically, the licensee identified degraded or missing internal conduit penetration seals for conduits that penetrate fire-rated barriers adversely affected the fire confinement capability defense-in-depth (DID) element because seal configurations did not meet criteria established in the licensee's FPP. Because this issue relates to fire protection, the team used the guidance in IMC 0609, Appendix F, "Fire Protection Significance Determination Process," to determine the significance of this finding. The inspectors determined that this finding was in the Fire Confinement SSD category.

The inspectors assessed the DID element of 21 of 27 FA barriers containing degraded internal steel conduit penetration seals in the fire confinement category. This typical internal fire seal configuration consisted of a nominal depth of 2" of bulk mineral fiber material plus 1/4" of FlameSafe S105 mastic material. Since the barrier type was degraded with < 10% depth of mineral fiber barrier material removed or compressed and/or cracks of the damming material of an equivalent diameter of 1/2" or less, the degradation level was categorized as Low (in accordance with IMC 0609, Appendix F, Attachment 2, Table A2.2). Question 1 of IMC 0609, Appendix F, Task 1.3.1 screened the finding to very low safety significance (Green) due to the finding being assigned a low degradation rating. The inspectors assessed the DID element of the remaining six FA barriers containing unsealed conduits in the fire confinement category. Since the

barrier type was an unsealed conduit greater than 2” in diameter with greater than 3 feet on each side of barrier, the degradation level was categorized as Moderate (in accordance with IMC 0609, Appendix F, Attachment 2, Table A2.2). Question 4 of IMC 0609, Appendix F, Task 1.3.2 screened the finding to very low safety significance (Green) because the exposed FAs contained no potential damage targets that are post-fire SSD components or other plant components whose loss might lead to a demand for safe shutdown.

Enforcement: PSL Unit 1 and Unit 2 renewed OLCs 3.E. state, in part, that the licensee shall implement and maintain in effect all provisions of the approved FPP as described in the UFSAR for the facility, and, as approved by various NRC Safety Evaluation Reports. The approved Unit 1 and Unit 2 FPP is maintained and documented in the PSL UFSAR, Appendix 9.5A, Fire Protection Program Report. Section 3.11.2(a) of Unit 1 and Unit 2 UFSAR Appendix 9.5A specifies, in part, that the overall construction of the fire barrier must have a 3-hour (minimum) fire resistance rating as defined by ASTM E-119. Alternate fire barrier configurations which have been evaluated in accordance with the guidance provided by GL 86-10 and determined to adequately meet fire barrier functions may be also be used.

Contrary to the above, the licensee identified a number of degraded or missing penetration seal configurations used for internal steel conduit penetration seals that penetrate fire-rated barriers. The licensee concluded that these fire barriers, which are required for separation of 27 fire areas (both units) containing systems, components, and equipment required for fire safe shutdown did not have a minimum 3-hour fire resistance rating nor were the fire barrier configurations evaluated in accordance with guidance provided in GL 86-10 and determined to adequately meet fire barrier functions. The licensee generated Licensee Event Reports (LERs) 05000335, 389/2006-005-00 and -01 and Condition Report CR 2006-34743 to track resolution of this issue in its corrective action program. The licensee documented that field work to restore degraded or missing internal steel conduit penetration seals was completed May 17, 2010 for Unit 1 and March 27, 2011 for Unit 2.

Pursuant to the Commission’s Enforcement Policy and NRC IMC 0305, under certain conditions fire protection findings at nuclear power plants that transition their licensing bases to 10 CFR 50.48(c) are eligible for enforcement and reactor oversight process (ROP) discretion. The Enforcement Policy and ROP also state that the finding must not be evaluated as Red. On December 22, 2005, the licensee submitted a letter to the NRC stating its intent to transition to 10 CFR 50.48(c). Because the licensee committed, prior to December 31, 2005, to adopt NFPA 805 and change their fire protection licensing bases to comply with 10 CFR 50.48(c), the NRC is exercising enforcement and ROP discretion for this issue in accordance with the NRC Enforcement Policy, Section 9.1, “Enforcement Discretion for Certain Fire Protection Issues (10 CFR 50.48),” and IMC 0305. Specifically, this issue was identified and addressed during the licensee’s transition to NFPA 805; was entered into the licensee’s corrective action program and compensatory measures were established while corrective actions were being implemented; was not likely to have been previously identified by routine licensee efforts; was not willful; and was not associated with a finding of high safety significance (i.e., Red).

.02 (Closed) Licensee Event Report (LER) 05000335/2007-003-00, Penetration Seals Outside Appendix R Requirements

Inspection Scope

On October 17, 2007, during the course of walkdowns being performed to evaluate internal conduit fire seals, the licensee identified three cable spreading room (CSR) floor penetrations which had not been installed or evaluated in accordance with 3-hour fire rating design details. The licensee generated AR 00479446 to track resolution of this issue in its CAP and submitted LER 05000335/2007-003-00.

Region II fire protection inspectors performed a detailed review of the information related to this LER. The inspectors performed in-office reviews of licensee documents and analyses, performed onsite walkdowns, and discussed the event with plant personnel to verify the qualification of the fire penetration seals installed in the CSR. The inspectors assessed the licensee's compensatory measures and corrective actions to ensure that they adequately restored compliance. The inspectors also evaluated the significance of degraded fire barriers that contained penetration seal configurations that did not meet regulatory requirements.

The following finding was identified by the licensee and is a violation of NRC requirements. This finding has been screened and determined to warrant enforcement discretion per the Interim Enforcement Policy Regarding Enforcement Discretion for Certain Fire Protection Issues (10 CFR 50.48). This LER is closed.

Findings

Introduction: A licensee-identified noncompliance of Unit 1 and Unit 2 OLCs 3.E., "Fire Protection," was identified for the failure to maintain separation between the CSR and the surrounding FAs by either barriers of a minimum of 3-hour rating or barriers that have been evaluated as acceptable. Specifically, during the course of walkdowns performed on October 17, 2007, to evaluate internal conduit fire seals, the licensee identified three CSR floor penetrations which had not been installed or evaluated in accordance with 3-hour fire rating design details.

Description: The PSL Unit 1 CSR is required to be separated from adjacent plant FAs by either barriers of a minimum of 3-hours rating or barriers that have been evaluated as acceptable. The floor of the PSL Unit 1 CSR (FZ 57) is located at Elevation 43.00', and is comprised of a reinforced concrete slab 16.00" thick. During field walkdowns being done in 2007 to confirm installation details for internal conduit seals, the licensee identified two 6-inch core bore penetrations communicating with the Electrical Penetration Room (EPR) 1B, (FZ 78) directly below at Elevation 19.50' which were not properly fire sealed. These core bores were originally installed to allow cable access from the EPR into the 1A 125V Load Test Panel located in the CSR. After the core bores were drilled, the equipment in the corresponding section of the load test panel was never installed and the openings were covered with a metal plate secured by mechanical anchors into the CSR floor slab. No additional fire sealant was installed in these core borings (8-inch Silicone Foam or equivalent). In addition, a "block-out" type floor penetration was also found to not have been properly sealed. This block out panel was found under the Vital AC Bus #1 in the CSR and communicated with an open mezzanine area below (FZ 55W) at Elevation 28.67'. The block out seal had only a 1.5" thick fire

resistive Marinite® “1” board covered with 0.25’ of Flame-Safe® Mastic installed on the fire exposed side of the barrier. It likewise, did not have a required fire sealant installed (8-inch Silicone Foam or equivalent) above the Marinite® “1” board. Neither of these penetration seals had been evaluated for equivalence in accordance with three-hour fire rating design details.

Analysis: Appendix “A” to Branch Technical Position APCS 9.5-1, Section D.1 (c) states that each cable spreading room should be separated from other areas of the plant by barriers having a minimum 3-hour fire resistance rating. The licensee’s failure to provide either 3-hour rated fire barrier installations or an evaluation of sufficient rigor to determine if the penetration seals would be acceptable is a performance deficiency. The performance deficiency is more than minor because it adversely affected the Mitigating Systems cornerstone attribute of protection against external events and adversely affected the cornerstone objective to ensure the availability, reliability and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the lack of installed fire retardant sealants (or equivalent materials) for those penetrations in the 1A 125V Load Test Panel and the Vital AC Bus #1 panel in the CSR affected their capability to provide the required 3-hours of fire resistance. In accordance with NRC IMC 0609 Appendix F, Part 1; “Fire Protection Significance Determination Process (SDP) Phase 1 Worksheet” the inspectors conducted an analysis of the penetrations in question and their associated FZs. The inspectors determined that this finding was in the fire confinement category. Question 7 of IMC 0609, Appendix F, Task 1.3.2 screened the block out seal finding to very low safety significance (Green) in Phase 1 and no further analysis was required. This was based on the fact that the seal would provide at least a limited amount of fire endurance protection (20 minutes) and that there were no nearby fuel or ignition sources directly beneath it. For the core bore penetrations it was determined that a Phase 2 SDP analysis needed to be performed because the metal plate could not be quantified for fire endurance. The results of the Phase 2 analysis determined the core bore penetration(s) finding also to be of very low safety significance (Green). This analysis is summarized as follows:

- FZ 78 contained a limited number of ignition sources classified as “general” electrical cabinets, modeled to generate likely fires in the 70kw to 200kw range. Because of the room volume and ceiling height, ignition of secondary cabling is unlikely. As with the block out seal, there were no nearby fuel or ignition sources beneath the core bore penetrations that would expose them directly to fire.
- For unlikely fires modeled in the 1000kw range a hot gas layer approaching 414°F could develop, but very little convective heat would be conducted through the limited surface area of the metal plate at the top of the two core bore penetrations. Since there was no combustible equipment installed within this portion of the 1A 125V Load Test Panel, the fire would not propagate into the CSR.

The Phase 2 analysis was considered complete at IMC 0609, Appendix F, Task 2.3.5, without further analysis because no credible fire scenario could be postulated which could affect equipment required for shutdown in FZs 57 and 78 through these two core bore penetrations.

Enforcement: The PSL Unit 1 Renewed OLC 3.E. states in part, that the licensee shall implement and maintain in effect all provisions of the approved FPP as described in the UFSAR for the facility, and, as approved by various NRC Safety Evaluation Reports.

The approved Unit 1 FPP is maintained and documented in the PSL Unit 1 UFSAR Appendix 9.5A, Fire Protection Program Report. Section 3.11.2 (a) of UFSAR Appendix 9.5A specifies, in part, that the overall construction of the fire barrier must have a 3-hour (min.) fire resistance rating as defined by ASTM E-119. Alternate fire barrier configurations which have been evaluated in accordance with the guidance provided by GL 86-10 and determined to adequately meet fire barrier functions may be also be used.

Contrary to the above, the licensee identified three fire barrier penetrations in the PSL Unit 1 CSR that did not have a minimum 3-hour fire resistance rating nor were the fire barrier configurations evaluated in accordance with guidance provided by GL 86-10 and determined to adequately meet fire barrier functions. Specifically, two core bore penetrations communicating from the EPR into the 1A 125V load test panel located in the CSR and one block out panel communicating from the open mezzanine to the Vital AC Bus #1 panel in the CSR did not have the required 3-hour fire resistance rating. The licensee generated LER 2007-003-00 and AR 00479446 to track resolution of this issue in its CAP.

Pursuant to the Commission's Enforcement Policy and NRC IMC 0305, under certain conditions fire protection findings at nuclear power plants that transition their licensing bases to 10 CFR 50.48(c) are eligible for enforcement and ROP discretion. The Enforcement Policy and ROP also state that the finding must not be evaluated as Red. On December 22, 2005, the licensee submitted a letter to the NRC stating its intent to transition to 10 CFR 50.48(c). Because the licensee committed, prior to December 31, 2005, to adopt NFPA 805 and change their fire protection licensing bases to comply with 10 CFR 50.48(c), the NRC is exercising enforcement and ROP discretion for this issue in accordance with the NRC Enforcement Policy, Section 9.1, "Enforcement Discretion for Certain Fire Protection Issues (10 CFR 50.48)," and IMC 0305. Specifically, this issue was identified and addressed during the licensee's transition to NFPA 805; was entered into the licensee's corrective action program and compensatory measures were established while corrective actions were being implemented; was not likely to have been previously identified by routine licensee efforts; was not willful; and was not associated with a finding of high safety significance (i.e., Red).

4OA6 Meetings, Including Exit

On March 29, 2013, the lead inspector presented the preliminary inspection results to Mr. J. Jensen, PSL Site Vice President, and other members of the licensee's staff, who acknowledged the results. Following completion of additional reviews in the Region II office, another exit meeting was held by telephone with Mr. E. Katzman, PSL Licensing Manager, and other members of the licensee's staff on May 13, 2013, to provide an update on changes to the preliminary inspection findings. The licensee acknowledged the findings. Proprietary information is not included in this IR.

4OA7 Licensee-Identified Violation

The following violation of very low safety significance (Green) was identified by the licensee and is a violation of NRC requirements which meets the criteria of the NRC Enforcement Policy for being dispositioned as a Non-Cited Violation.

PSL Unit 1 Renewed OLC 3.G and Unit 2 Renewed OLC 3.L required in part, that B.5.b equipment be pre-staged and readily available to mitigate fuel damage resulting from a

large fire and/or explosion. Contrary to the above, the licensee failed to meet the requirements of Renewed OLCs 3.G and 3.L for Units 1 and 2 respectively, in that B.5.b equipment was not readily available to mitigate fuel damage following a large fire or explosion. Specifically, on multiple occasions between February 2009 and February 2013, B.5.b equipment would not have started and/or run for the required time following a large fire or explosion, due to various maintenance related issues. The inspectors determined that the B.5.b equipment would not have been recoverable within the time specified for one spent fuel pool mitigation strategy. The inspectors assessed this finding using the guidance in IMC 0609 Appendix L, "B.5.b Significance Determination Process," Table 2, "Significance Characterization," dated December 24, 2009. The inspectors determined this finding met the criteria listed in Table 2 for very low safety significance (Green) because it only affected unrecoverable unavailability of an individual mitigation strategy. The licensee entered this issue into the CAP as AR 01844823.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee Personnel

G. Arntson, Engineering
M. Baughman, Training Manager
E. Belizar, Site Project Manager
C. Bible, Site Engineering Director
D. Calabrese, Emergency Preparedness Manager
R. Conrad, Fire Protection Engineer
S. Cornell, Engineering
M. DiMarco, Performance Improvement Manager
R. Dorst, Fire Protection
R. Filipek, Engineering Design Manager
J. Hoffman, Extended Power Uprate Manager
J. Hurchalla, Engineering
J. Jensen, Site Vice President
R. Kilian, Operations Supervisor
C. Martin, Radiation Protection Manager
R. McDaniel, Fire Protection Supervisor
L. Porro, Engineering Programs Manager
V. Rubano, Fleet Project Engineering Manager NFPA 805
W. Sandel, Fire Protection
R. Sciscente, Licensing
M. Seidler, Security Manager
M. Snyder, Site Quality Manager
P. Sullivan, Maintenance Supervisor
D. Tanis, Safety Supervisor

NRC Personnel

T. Morrissey, Senior Resident Inspector, PSL
R. Reyes, Resident Inspector, PSL

LIST OF ITEMS OPENED, CLOSED AND DISCUSSED

Opened

None

Opened and Closed

05000335, 389/2013007	NCV	Failure to Demonstrate Feasibility of All OMAs Used as Compensatory Measures (Section 1R05.10)
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Closed

05000335, 389/2006-005-00 and 01	LER	Internal Conduit Seals Outside Appendix R Requirements (Section 4OA3.01)
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05000335/2007-003-00

LER

Penetration Seals Outside Appendix
R Requirements (Section 4OA3.02)

Discussed

None

SUPPLEMENTAL INFORMATION

LIST OF FIRE BARRIER FEATURES INSPECTED (Refer Report Section 1RO5.02- Passive Fire Barriers)

Fire Barriers Floors/Walls/Ceiling Identification

Poured Concrete Wall Construction
Thermo-Lag Wall Construction

Description

FA F/FZ70 to FAZ/FZ83
FA A/FZ44A to FAE/FZ47

Fire Damper Identification

Damper FDPR 25-64
Damper FDPR 25-119

Description

FA A/FZ 44A to FA E/FZ 47
FA A/FZ 60 to FA B/FZ 57

Fire Door Identification

Door RA 46
Door RA 48
Door RA 65
Door RA 317

Description

FA A/FZ 60 to FA B/FZ 57
FA A/FZ 60 to FA E/FZ 61
FA A/FZ 60 to FA C/FZ 56
FA A/FZ 44A to FA E/FZ 47

LIST OF COMPONENTS REVIEWED

(Refer to Report Sections 1R05.01 / 1R05.03 / 1R05.05 / 1R05.06)

Fire Pump 1A
Fire Pump 1B
Fire Pump Pressure Switch 15-3
Fire Pump Pressure Switch 15-21
Diesel Generator 1B Start Circuits
Diesel Generator 1B Breaker
Diesel Generator 1B Remote Control Governor
Charging Pump 1B
High Pressure Safety Injection Discharge Valve HCV-3617
High Pressure Safety Injection Discharge Valve HCV-3637
Auxiliary Feedwater Pump 1B Discharge Valve MV-09-10 to Steam Generator 1B
4160V Switchgear 1B3 Load Shed Relays
480V Switchgear 1B2 Relays
Containment Purge Exhaust Fan HFE-8

LIST OF DOCUMENTS REVIEWED

Procedures

0-NOP-47.02, 480V Load Center Breaker Operation, Rev. 12
0-OSP-15.13A, 1A Fire Pump Monthly Operability Test, Rev. 2
0-OSP-15.14, Fire Protection System Annual Valve Cycle, Rev. 8
0-OSP-15.17, Fire Protection System Triennial Flow Test, Rev. 2
0-OSP-100.21, Portable Diesel Fire Pump Operability, Rev. 14
0-PME-50.10, Preventative Maintenance Procedure: Self Contained Emergency Lighting Unit Maintenance and Inspection, Rev. 5
1-AOP-01.13, Natural Circulation Cooldown, Rev. 1
1-AOP-02.03, Charging and Letdown, Rev. 4
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 AR 00566679, 1A2 Circulating Water Pump-Smoke Coming from Motor
 AR 01640630, Heat Tracing Cabinet-Circuit Card Fire
 AR 01695541, Review of RIS 2011-012
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 AR 01692252, Appendix R fire ONP may not be implemented as required
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 AR 01701818, Appendix R ARs received incorrect significance Level/NCAQ
 AR 01720263, Temp. Power Supply U-2 Turbine Bldg-Plug Arced and Tripped Power Supply
 AR 01752486, 1A Main Feed Water Pump Overhead Hoist-Smoke from Motor
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 AR 01616289, Portable Diesel Fire Pump Failed Surveillance
 AR 00522083, Portable Diesel Fire Pump Failed

AR 00458485, Diesel Fire Pump Out of Service
AR 01831298, On Shift Staffing Analysis Recommendations
AR 01839409, Breaker Coordination
AR 01845313, Inadequate isolation of Appendix R cables for 1B2 480 VAC Switchgear
AR 01848789, Incomplete review of 125Vdc power for RTGB-106 in Unit 1
AR 01848801, Appendix R cables for 125Vdc bus 1AB-1 routed in credited fire areas without adequate isolation
AR 01851405, B5b Surveillance Procedure Requires Additional Evaluation
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AR 01855322, 1-ONP-100.01 Time critical action needs ladder
AR 01640340, Heat Trace Fire

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AR 01856868, Conduit marking tape color appears incorrect on 1B 4160V/480V SWGR
AR 01856215, Potential moisture intrusion in electrical box B1527
AR 01855950, Discovered cigarette butt in Unit 1 RCA cable loft enclosure
AR 01850318, 2013 NRC TFPI drawing anomaly discovered
AR 01857289, Weakness in extent of condition for AR 01701818
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AR 01860482, Re-evaluation of fire protection compensatory actions
AR 01860555, Use of Simulator for validation of time critical actions
AR 01860866, Incomplete validation of OMA's for Fire Protection from 2006
AR 01860884, Pump not tested for full lift
AR 01860888, Documented technical basis of allowed Class A and B materials is needed
AR 01860907, Drainage for fire suppression activities
AR 01860975, Review 0010503- Procedure Enhancement for Guidelines of NFPA 30 – 1973
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LIST OF ACRONYMS AND ABBREVIATIONS

AC	Alternating Current
ACE	Apparent Cause Evaluation
AP	Administrative Procedure
APCSB	Auxiliary and Power Conversion Systems Branch
AR	Action Request
ASTM	American Society of Testing Materials
BTP	Branch Technical Position
CAP	Corrective Action Program
CR	Condition Report
CSR	Cable Spreading Room
DID	Defense-in-Depth
ELU	Emergency Lighting Unit
EPR	Electrical Penetration Room
FA	Fire Area
FHA	Fire Hazards Analysis
FM	Factory Mutual
FPP	Fire Protection Program
FZ	Fire Zone
GL	Generic Letter
HVAC	Heating, Ventilation and Air Conditioning
IMC	Inspection Manual Chapter
IN	Information Notice
IP	Inspection Procedure
IR	Inspection Report
LER	Licensee Event Report
MCR	Main Control Room
NCV	Non-cited Violation
NFPA	National Fire Protection Association
NRC	Nuclear Regulatory Commission
NUREG	An explanatory document published by the NRC
OLC	Operating License Condition
OMA	Operator Manual Action
ONP	Off-Normal Operating Procedure
PSL	St. Lucie Nuclear Plant
RIS	Regulatory Issue Summary
ROP	Reactor Oversight Process
SCBA	Self-Contained Breathing Apparatus
SDP	Significance Determination Process
SER	Safety Evaluation Report
SFP	Spent Fuel Pool
SSA	Safe Shutdown Analysis
SSD	Safe Shutdown
TFPI	Triennial Fire Protection Inspection
UFSAR	Updated Final Safety Evaluation Report
UL	Underwriters Laboratory
V	Volt