



Florida Power & Light Company, 6501 S. Ocean Drive, Jensen Beach, FL 34957

December 14, 2007

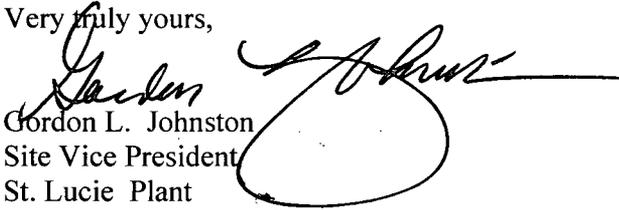
L-2007-199
10 CFR 50.73

U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D. C. 20555

Re: St. Lucie Unit 1
Docket No. 50-335
Reportable Event: 2007-003-00
Date of Event: October 17, 2007
Floor Penetration Seals Outside Appendix R Design Basis

The attached Licensee Event Report 2007-003-00 is being submitted pursuant to the requirements of 10 CFR 50.73 to provide notification of the subject event.

Very truly yours,


Gordon L. Johnston
Site Vice President
St. Lucie Plant

GLJ/dlc

Attachment

JE22
NRR

LICENSEE EVENT REPORT (LER)

Estimated burden per response to comply with this mandatory collection request: 50 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the Records and FOIA/Privacy Service Branch (T-5 F52), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to infocollects@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202, (3150-0104), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

1. FACILITY NAME St. Lucie Unit 1	2. DOCKET NUMBER 05000335	3. PAGE 1 OF 3
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4. TITLE
Floor Penetration Seals Outside Appendix R Design Basis

5. EVENT DATE			6. LER NUMBER			7. REPORT DATE			8. OTHER FACILITIES INVOLVED	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REV NO.	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
10	17	2007	2007	003	00	12	14	2007	FACILITY NAME	DOCKET NUMBER

9. OPERATING MODE 1	11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR§: (Check all that apply)									
	<input type="checkbox"/> 20.2201(b)	<input type="checkbox"/> 20.2203(a)(3)(i)	<input type="checkbox"/> 50.73(a)(2)(i)(C)	<input type="checkbox"/> 50.73(a)(2)(vii)						
10. POWER LEVEL 100%	<input type="checkbox"/> 20.2201(d)	<input type="checkbox"/> 20.2203(a)(3)(ii)	<input type="checkbox"/> 50.73(a)(2)(ii)(A)	<input type="checkbox"/> 50.73(a)(2)(viii)(A)						
	<input type="checkbox"/> 20.2203(a)(1)	<input type="checkbox"/> 20.2203(a)(4)	<input checked="" type="checkbox"/> 50.73(a)(2)(ii)(B)	<input type="checkbox"/> 50.73(a)(2)(viii)(B)						
	<input type="checkbox"/> 20.2203(a)(2)(i)	<input type="checkbox"/> 50.36(c)(1)(i)(A)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(ix)(A)						
	<input type="checkbox"/> 20.2203(a)(2)(ii)	<input type="checkbox"/> 50.36(c)(1)(ii)(A)	<input type="checkbox"/> 50.73(a)(2)(iv)(A)	<input type="checkbox"/> 50.73(a)(2)(x)						
	<input type="checkbox"/> 20.2203(a)(2)(iii)	<input type="checkbox"/> 50.36(c)(2)	<input type="checkbox"/> 50.73(a)(2)(v)(A)	<input type="checkbox"/> 73.71(a)(4)						
	<input type="checkbox"/> 20.2203(a)(2)(iv)	<input type="checkbox"/> 50.46(a)(3)(ii)	<input type="checkbox"/> 50.73(a)(2)(v)(B)	<input type="checkbox"/> 73.71(a)(5)						
<input type="checkbox"/> 20.2203(a)(2)(v)	<input type="checkbox"/> 50.73(a)(2)(i)(A)	<input type="checkbox"/> 50.73(a)(2)(v)(C)	<input type="checkbox"/> OTHER							
<input type="checkbox"/> 20.2203(a)(2)(vi)	<input type="checkbox"/> 50.73(a)(2)(i)(B)	<input type="checkbox"/> 50.73(a)(2)(v)(D)	Specify in Abstract below or in NRC Form 366A							

12. LICENSEE CONTACT FOR THIS LER

NAME Donald L. Cecchett - Licensing Engineer	TELEPHONE NUMBER (Include Area Code) 772-467-7155
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13. COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT

CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX
B	NH	PEN	NA	NO					

14. SUPPLEMENTAL REPORT EXPECTED <input type="checkbox"/> YES (If yes, complete 15. EXPECTED SUBMISSION DATE) <input checked="" type="checkbox"/> NO	15. EXPECTED SUBMISSION DATE MONTH: - DAY: - YEAR: -
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ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines)

On October 17, 2007, St. Lucie Unit 1 was in Mode 1 at 100 percent reactor power. In August 2007, FPL identified that certain fire penetration seal configurations in the floor of the Unit 1 Cable Spread Room (CSR) may not meet the three-hour fire rating requirements. On October 17, 2007, FPL concluded that the non-complying seal configurations were reportable under 10 CFR 50.72 and 10 CFR 50.73 requirements. The existing penetration configurations, as installed, represent an unanalyzed condition which significantly degraded plant safety.

The apparent cause was determined to be a legacy issue stemming from inadequate original construction and installation of the fire seals. At the time of discovery condition reports were initiated and general fire barrier impairments logged in accordance with the Fire Protection Program. The degraded penetrations continue to be compensated by a roving fire watch in accordance with the Fire Protection Program.

Corrective actions planned include installing penetration seal configurations or restoring the barrier under the Vital AC Bus #1 and the 1A Load Test Panel. Further inspections will be conducted on similar electrical penetrations within Unit 1 and Unit 2 to determine if other occurrences of this condition may exist.

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NARRATIVE

Description of the Event

During the course of walkdowns of the internal conduit fire seals [EIIS:PEN] FPL identified that three fire floor penetrations, one block-out seal and two six-inch diameter corebore seals, in the Cable Spread Room (CSR) located beneath the Unit 1 Vital AC Bus #1 and the 1A Load Test panel respectively, did not have qualified three-hour fire rated penetration seals installed. The as-found block-out seal consists of a refractive board (Maranite) covered by a coating of mastic material on one side but was lacking the required four inches of mastic material on the other side as indicated on plant drawings. Fire breach permits are in place and compensatory measures for a roving watch has been implemented in accordance with the Fire Protection Plan. The non-complying seal configurations were previously identified by FPL on August 1 and August 21, 2007, but FPL did not conclude that the condition was reportable under 10 CFR 50.72 and 10 CFR 50.73 requirements until October 17, 2007.

Cause of the Event

The apparent cause was determined to be a legacy issue stemming from inadequate original construction and installation of the fire seals.

Analysis of the Event

NUREG-1022, "Event Reporting Guidelines 10 CFR 50.72 and 50.73," Revision 2, Section 3.2.4, states "if fire barriers are found to be missing, such that the required degree of separation for redundant safe shutdown trains is lacking, the event would be reportable as an unanalyzed condition that significantly degraded plant safety." At the time of discovery one-hour roving fire watches for the affected areas were already in place for unrelated reasons. Therefore, this event was not reportable under 10 CFR 50.72, but is reportable under 10 CFR 50.73(a)(2)(ii)(B).

Analysis of Safety Significance

Fire protection for nuclear plants is based on the defense-in-depth concept. Of the three primary barriers (prevention, detection and control, and protection of safe shutdown capabilities), inadequate penetration seal configuration is considered a degradation of the protection of safe shutdown capability. The effect on the fire protection program due to the penetration seal configuration does not compromise the ability to achieve safe shutdown. Although the as-found condition of these fire penetration seals was not in accordance with a tested three-hour qualified configuration and may not meet a three-hour fire rating, the installation does provide resistance to fire propagation.

The remaining two defense-in-depth primary barriers, prevention of fires and prompt detection and control of fires, remained intact. Fire protection defense-in-depth provides an integrated means for mitigating the consequences of a fire, such as the existing smoke detection systems, an automatic suppression system, hose stations, administrative programs that control combustible loading, and operator actions.

The automatic suppression system for the Unit 1 CSR was not adversely impacted by the degraded seal penetration configuration. There were no visible breaches of the board/mastic material present that would provide a ventilation pathway that would

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impact the Halon 1301 system. The two core bore seals are void of seal material or grout and are covered by a thin gauge steel sheet, secured in place with screws. Neither of these seal configurations have a fire test which would qualify them to provide a three-hour fire rating. The Halon 1301 system protects the Unit 1 CSR and is considered operable based on the presence of these configurations since initial installation and successful acceptance testing of the Halon 1301 system.

A breach permit for the penetration seals between Unit 1 CSR and B Penetration Room and east end of the 19.5' RAB and 28' 8" Cable Lofts have been established and results in enhancing the existing hourly fire watch patrol that has been in place as a compensatory measure for other reasons in excess of the previous ten years. The combination of the roving fire watch and existing detection, suppression in the CSR, and an average ten-minute response time to the affected fire areas provides reasonable assurance that detection and extinguishment activities will be performed before the fire could breach the barrier of the CSR from either of the areas below. Therefore, the ability to achieve and maintain safe shutdown will not be impacted and has no significant effect on the health and safety of the public.

Corrective Actions

The proposed corrective actions listed below are entered into the site corrective action program. Any changes to the proposed actions will be managed under the commitment management change program.

1. Install three-hour qualified fire barrier configuration/penetration seals under the Vital AC Bus #1 and 1A Load Test Panel in the Unit 1 Cable Spread Room.
2. Inspect similar electrical penetrations in Unit 1 and Unit 2 to identify and repair any related conditions.

Similar Events

A review of St. Lucie condition reports for the past three years identified two events, LER 2006-005, "Internal Conduit Penetration Seals Outside Appendix R Design Basis," in which internal conduit penetration seals were degraded due to inadequate qualification testing methods, and LER 2003-03-001, "Fire Seals Inoperable Due to Inadequate Qualification Testing," dated April 5, 2004 in which cable tray fire penetration seals did not have an adequate basis as three-hour fire barriers. Beyond three years two additional LERs were identified i.e., LER 97-08, "Inoperable Mechanical Fire Penetrations Outside Appendix R Design Bases" dated August 27, 1997 (L-97-221), involving incomplete corrective actions associated with NRC Information Notice (IN) 94-28, and LER 97-004, "Incorrect Original Cable Tray Fire Stop Assembly Outside Appendix R Design," dated July 11, 1997 (L-97-179), which involved double-sided cable tray fire stops not being installed in accordance with the design drawings.

Failed Components

None.