



August 20, 2012

L-2012-284  
10 CFR 50.73

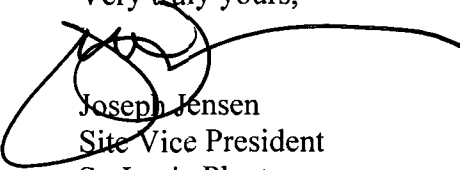
U-S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
Washington, D.C. 20555

Re: St. Lucie Unit 1 and 2  
Docket No. 50-335, 50-389  
Reportable Event: 2012-004  
Date of Event: August 1, 2012

Seismically Qualified Refueling Water Tank Aligned to Non-seismic Piping

The attached Licensee Event Report 2012-004 is being submitted pursuant to the requirements of 10 CFR 50.73 to provide notification of the subject event.

Very truly yours,



Joseph Jensen  
Site Vice President  
St. Lucie Plant

JJ/kdr  
Attachment

JE22  
NRR

<b>NRC FORM 366 U.S. NUCLEAR REGULATORY COMMISSION</b> (10-2010)  <b>LICENSEE EVENT REPORT (LER)</b>	APPROVED BY OMB: NO. 3150-0104      EXPIRES: 10/31/2013 Estimated burden per response to comply with this mandatory collection request: 80 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the FOIA/Privacy Section (T-5 F53), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to infocollects.resourse@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.
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<b>1. FACILITY NAME</b> St. Lucie Unit 1	<b>2. DOCKET NUMBER</b> 05000335	<b>3. PAGE</b> 1 OF 3
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**4. TITLE**  
Seismically Qualified Refueling Water Tank Aligned to Non-seismic Piping

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
08	01	2012	2012	004	00	08	20	2012	St. Lucie Unit 2	05000389
									FACILITY NAME	DOCKET NUMBER

<b>9. OPERATING MODE</b>  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)
	<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 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)
<b>10. POWER LEVEL</b>  100%	<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 checked="" 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 Kathleen Rydman - Principal Engineer, Licensing	TELEPHONE NUMBER (Include Area Code) 772-467-7680
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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-FACTURE	REPORTABLE TO EPIX
				No					

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

On August 1, 2012, with Unit 1 operating at 100 percent power and Unit 2 reducing power from approximately 70 percent power to approximately 68 percent power as part of a coastdown for the upcoming refueling outage, it was determined that opening the boundary valve between the safety related and seismically qualified Refueling Water Tank (RWT) and the non-safety related and non-seismically qualified Spent Fuel Purification (SFP) system in Modes 1-4 renders the RWT inoperable. The isolation between the seismic and non-seismic piping is accomplished via a normally locked closed, manually operated, seismically qualified isolation valve (V07104). The piping on the discharge of the fuel pool purification pump is not seismically qualified and could fail during a seismic event. As a result, with V07104 open and aligned for fuel pool purification, this alignment could result in a loss of inventory from the RWT during a seismic event rendering the RWT inoperable. Consistent with NRC Information Notice 2012-01, it has been determined that opening the boundary valve for planned maintenance activities while the plant was operating in Modes 1 through 4 would render the RWT inoperable regardless of the administrative controls that were in place. Since the boundary valve had been opened under administrative controls in Modes 1 through 4 and the one hour completion time of the Action Statement for Technical Specification 3.5.4 was not satisfied, this represents a condition prohibited by Technical Specifications and is reportable pursuant to 10 CFR 50.73(a)(2)(i)(B). This event had no significant safety consequence since a seismic event had not occurred while the SFP system was aligned to the RWT.

**LICENSEE EVENT REPORT (LER)  
CONTINUATION SHEET**

1. FACILITY NAME	2. DOCKET	6. LER NUMBER			3. PAGE
St. Lucie Unit 1	05000335	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	Page 2 of 3
		2012	- 004	- 00	

**NARRATIVE**

**Description of the Event**

On August 1, 2012, with Unit 1 operating at 100 percent power and Unit 2 reducing power from approximately 70 percent power to approximately 68 percent power as part of a coastdown for the upcoming refueling outage, it was determined that opening the boundary valve between the safety related and seismically qualified Refueling Water Tank (RWT) and the non-safety related and non-seismically qualified Spent Fuel Purification (SFP) system in Modes 1-4 renders the RWT inoperable.

The isolation between the seismic and non-seismic piping is accomplished via a normally locked closed, manually operated, seismically qualified isolation valve (V07104). The piping on the discharge of the fuel pool purification pump is not seismically qualified and could fail during a seismic event. As a result, with V07104 open and aligned for fuel pool purification, this alignment could result in a loss of inventory from the RWT during a seismic event rendering the RWT inoperable. Consistent with NRC Information Notice 2012-01, it has been determined that opening the boundary valve for planned maintenance activities while the plant was operating in Modes 1 through 4 would render the RWT inoperable regardless of the administrative controls that were in place. Since the boundary valve had been opened under administrative controls in Modes 1 through 4 and the one hour completion time of the Action Statement for Technical Specification 3.5.4 was not satisfied, this represents a condition prohibited by Technical Specifications and is reportable pursuant to 10 CFR 50.73(a)(2)(i)(B).

**Cause**

The direct cause of this event was an incorrect application of compensatory measures (i.e., manual operator actions) when placing the non-seismic SFP system in service on seismically qualified systems/components (RWT) for planned maintenance activities during Modes 1 through 4. Prior to the issuance of NRC Information Notice 2012-01, manual operator actions had been evaluated and deemed acceptable in accordance with processes and procedures in place at that time. However, recently it has been determined that licensees cannot use compensatory measures to mitigate RWT operability for planned maintenance activities should a seismic event occur.

**Analysis of Safety Significance**

Since no seismic events occurred while the SFP system was aligned to the RWT, this event had no significant safety consequence and there is no increase in risk above the baseline. In addition, procedural controls were in place to maintain the RWT level such that sufficient time (30 minutes) was available for plant personnel to isolate the RWT from the non-seismic piping by closing V07104 prior to the level falling below that required to satisfy the Technical Specification 3.5.4.a minimum volume Limiting Condition for Operation.

Also, although not specifically credited following a seismic event, the safety injection tanks have been credited as a backup water source for RCS makeup during safe shutdown.

This licensee event report is being reported in accordance with 10 CFR 50.73(a)(2)(i)(B) as a condition prohibited by Technical Specifications.

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CONTINUATION SHEET**

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St. Lucie Unit 1	05000335	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	Page 3 of 3
		2012	- 004	- 00	

**NARRATIVE**

**Immediate Corrective Actions**

An Operations Department Policy was issued which outlines the conditions for RWT operability when aligned to the SFP system.

**Additional Corrective Actions**

The various options for properly aligning the RWT to the SFP system are being evaluated as part of the apparent cause evaluation being performed under the corrective action program.

**Similar Events**

This condition was previously documented in the corrective action program. Prior corrective actions implemented administrative controls including manual operator actions. However, consistent with Information Notice 2012-01, it has been determined that compensatory measures such as operator actions cannot be used to mitigate RWT operability should a seismic event occur.

**Failed Component(s)**

N/A

**Manufacture**

N/A