



February 13, 2024  
L-2024-017  
10 CFR 50.73

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

Re: St. Lucie Unit 2  
Docket No. 50-389  
Reportable Event: 2024-01-00  
Date of Event: December 15, 2023

Safety Injection Tank Vent Through Wall Leakage

The attached Licensee Event Report, 2024-01, is being submitted pursuant to the requirements of 10 CFR 50.73 to provide notification of the subject event.

Should you have any questions regarding this submission, please contact Mr. Kenneth Mack, Fleet Licensing Manager, at 561-904-3635.

This letter contains no new or modified regulatory commitments.

Sincerely,

A handwritten signature in black ink, appearing to read 'D. Strand', is written over a horizontal line. To the right of the signature, the word 'for' is written in a cursive script.

Dianne Strand  
General Manager, Regulatory Affairs  
Florida Power & Light Company

Attachment

cc: St. Lucie NRC Senior Resident Inspector  
St. Lucie Station NRC Program Manager

Florida Power & Light Company

6501 S. Ocean Drive, Jensen Beach, FL 34957



## LICENSEE EVENT REPORT (LER)

(See Page 2 for required number of digits/characters for each block)

(See NUREG-1022, R.3 for instruction and guidance for completing this form  
<http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1022/r3/>)

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, Library, and Information Collections Branch (T-6 A10M), U. S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by email to [Infocollections.Resource@nrc.gov](mailto:Infocollections.Resource@nrc.gov), and the OMB reviewer at: OMB Office of Information and Regulatory Affairs, (3150-0104), Attn: Desk Officer for the Nuclear Regulatory Commission, 725 17th Street NW, Washington, DC 20503; email: [aira\\_submission@omb.eop.gov](mailto:aira_submission@omb.eop.gov). The NRC may not conduct or sponsor, and a person is not required to respond to, a collection of information unless the document requesting or requiring the collection displays a currently valid OMB control number.

1. Facility Name  
St. Lucie Unit 2☒ 050  
☐ 0522. Docket Number  
003893. Page  
1 OF 2

## 4. Title

Safety Injection Tank Vent Line Through Wall Leakage

5. Event Date			6. LER Number			7. Report Date			8. Other Facilities Involved		
Month	Day	Year	Year	Sequential Number	Revision No.	Month	Day	Year	Facility Name	<input type="checkbox"/> 050	Docket Number
12	15	2024	2024	- 01 -	0	02	13	2024	Facility Name	<input type="checkbox"/> 052	Docket Number

9. Operating Mode

3

10. Power Level

0

## 11. This Report is Submitted Pursuant to the Requirements of 10 CFR §: (Check all that apply)

<input checked="" type="checkbox"/> 10 CFR Part 20	<input type="checkbox"/> 20.2203(a)(2)(vi)	<input checked="" type="checkbox"/> 10 CFR Part 50	<input checked="" type="checkbox"/> 50.73(a)(2)(ii)(A)	<input type="checkbox"/> 50.73(a)(2)(viii)(A)	<input type="checkbox"/> 73.1200(a)
<input type="checkbox"/> 20.2201(b)	<input type="checkbox"/> 20.2203(a)(3)(i)	<input type="checkbox"/> 50.36(c)(1)(i)(A)	<input type="checkbox"/> 50.73(a)(2)(ii)(B)	<input type="checkbox"/> 50.73(a)(2)(viii)(B)	<input type="checkbox"/> 73.1200(b)
<input type="checkbox"/> 20.2201(d)	<input type="checkbox"/> 20.2203(a)(3)(ii)	<input type="checkbox"/> 50.36(c)(1)(ii)(A)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(ix)(A)	<input type="checkbox"/> 73.1200(c)
<input type="checkbox"/> 20.2203(a)(1)	<input type="checkbox"/> 20.2203(a)(4)	<input type="checkbox"/> 50.36(c)(2)	<input type="checkbox"/> 50.73(a)(2)(iv)(A)	<input type="checkbox"/> 50.73(a)(2)(x)	<input type="checkbox"/> 73.1200(d)
<input type="checkbox"/> 20.2203(a)(2)(i)	<input checked="" type="checkbox"/> 10 CFR Part 21	<input type="checkbox"/> 50.46(a)(3)(ii)	<input type="checkbox"/> 50.73(a)(2)(v)(A)	<input checked="" type="checkbox"/> 10 CFR Part 73	<input type="checkbox"/> 73.1200(e)
<input type="checkbox"/> 20.2203(a)(2)(ii)	<input type="checkbox"/> 21.2(c)	<input type="checkbox"/> 50.69(g)	<input type="checkbox"/> 50.73(a)(2)(v)(B)	<input type="checkbox"/> 73.77(a)(1)	<input type="checkbox"/> 73.1200(f)
<input type="checkbox"/> 20.2203(a)(2)(iii)		<input type="checkbox"/> 50.73(a)(2)(i)(A)	<input type="checkbox"/> 50.73(a)(2)(v)(C)	<input type="checkbox"/> 73.77(a)(2)(i)	<input type="checkbox"/> 73.1200(g)
<input type="checkbox"/> 20.2203(a)(2)(iv)		<input type="checkbox"/> 50.73(a)(2)(i)(B)	<input type="checkbox"/> 50.73(a)(2)(v)(D)	<input type="checkbox"/> 73.77(a)(2)(ii)	<input type="checkbox"/> 73.1200(h)
<input type="checkbox"/> 20.2203(a)(2)(v)		<input type="checkbox"/> 50.73(a)(2)(i)(C)	<input type="checkbox"/> 50.73(a)(2)(vii)		

☐ OTHER (Specify here, in abstract, or NRC 366A).

## 12. Licensee Contact for this LER

Licensee Contact

Bob Murrell, Licensing Engineer

Phone Number (Include area code)

319-651-9496

## 13. Complete One Line for each Component Failure Described in this Report

Cause	System	Component	Manufacturer	Reportable to IRIS	Cause	System	Component	Manufacturer	Reportable to IRIS
B	BQ	PSF	NA	Y					

## 14. Supplemental Report Expected

☒ No ☐ Yes (If yes, complete 15. Expected Submission Date)

## 15. Expected Submission Date

Month Day Year

## 16. Abstract (Limit to 1326 spaces, i.e., approximately 13 single-spaced typewritten lines)

On December 15, 2023, while in Mode 3, it was determined that the Reactor Coolant Pressure Boundary (RCPB) had a through wall flaw with Safety Injection Tank (SIT) leakage. The leakage was coming from the welded connection of a vent valve for SIT 2A2 outlet valve piping segment SI-227. The cause of the leak was stresses resulting in fatigue crack initiation and propagation. This leak resulted in the Unit being in a Degraded Condition. There were no Systems, Structures, or Components inoperable that were inoperable at the start of the event that contributed to the event. This event is being reported pursuant of 10 CFR 50.73(a)(2)(ii)(A), Degraded Condition.



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

(See NUREG-1022, R.3 for instruction and guidance for completing this form  
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<b>1. FACILITY NAME</b>  St. Lucie	<input checked="" type="checkbox"/> 050	<b>2. DOCKET NUMBER</b>  00389	<b>3. LER NUMBER</b>				
	<input type="checkbox"/> 052		<table border="1"><tr><td><b>YEAR</b></td><td><b>SEQUENTIAL NUMBER</b></td><td><b>REV NO.</b></td></tr><tr><td>2024</td><td>001</td><td>0</td></tr></table>	<b>YEAR</b>	<b>SEQUENTIAL NUMBER</b>	<b>REV NO.</b>	2024
<b>YEAR</b>	<b>SEQUENTIAL NUMBER</b>	<b>REV NO.</b>					
2024	001	0					

**NARRATIVE****Description of Event:**

On December 15, 2023, while in Mode 3, it was determined that the Reactor Coolant Pressure Boundary (RCPB) had a through wall flaw with Safety Injection Tank (SIT) leakage. The leakage was coming from the welded connection of a vent valve for SIT 2A2 outlet valve piping segment SI-227. This leak resulted in the Unit being in a Degraded Condition. There were no Systems, Structures, or Components inoperable that were inoperable at the start of the event that contributed to the event.

**Cause of Event:**

The cause of the leak was stresses resulting in fatigue crack initiation and propagation. These stresses were related to internal pressure within the piping, bending stresses related to the vent valve weight and its mounting arrangement, and system vibration.

**Safety Significance:**

This event did not prevent any safety systems from performing their safety related functions based on the minimal amount of leakage identified.

This Licensee Event Report is being reported pursuant of 10 CFR 50.73(a)(2)(ii)(A), Degraded Condition.

This event did not result in a Safety System Functional Failure.

**Corrective Actions:**

Repairs to SI-227 were completed on December 16, 2023.

**Similar Events:**

A review of events over the past 5 years did not identify any previous events that involved the same underlying cause of the event reported under this Licensee Event Report.