



July 11, 2024  
L-2024-117  
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: 2024-02-01  
Date of Event: January 3, 2024

**Safety Injection Tank Vent Through Wall Leakage**

The attached Licensee Event Report, 2024-02-01, 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,

*Kenneth Mack*

Paul Rasmus  
General Manager – Regulatory Affairs – Nuclear Fleet  
Florida Power & Light Company

Attachment

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



## 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 [Infocollects.Resource@nrc.gov](mailto:Infocollects.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. 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	<input checked="" type="checkbox"/> 050 <input type="checkbox"/> 052	2. Docket Number	3. Page
St. Lucie Unit 2		00389	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
01	02	2024	2024	- 02 -	01	7	11	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)

10 CFR Part 20	<input type="checkbox"/> 20.2203(a)(2)(vi)	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)	10 CFR Part 21	<input type="checkbox"/> 50.46(a)(3)(ii)	<input type="checkbox"/> 50.73(a)(2)(v)(A)	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	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	N/A	Y					

## 14. Supplemental Report Expected

<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes (If yes, complete 15. Expected Submission Date)	15. Expected Submission Date	Month	Day	Year
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## 16. Abstract (Limit to 1326 spaces, i.e., approximately 13 single-spaced typewritten lines)

This LER revision supersedes LER 2024-02-00 in its entirety.

On January 3, 2024, 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 microcracks in weld material from a December 16, 2023, repair. This leak resulted in the Unit being in a Degraded Condition. There were no Systems, Structures, or Components 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  
<http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1022/r3/>)

APPROVED BY OMB: NO. 3150-0104

EXPIRES: 04/30/2027

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1. FACILITY NAME	<input checked="" type="checkbox"/> 050 <input type="checkbox"/> 052	2. DOCKET NUMBER	3. LER NUMBER		
St. Lucie Unit 2		00389	YEAR 2024	- 02	- 01

## NARRATIVE

## Description of Event:

On January 3, 2024, 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 that were inoperable at the start of the event that contributed to the event.

## Cause of Event:

The leak was caused by microcracks in weld material from a December 16, 2023, repair. These microcracks occurred during solidification of the weld material.

## 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 January 5, 2024.

## Similar Events:

A review of events over the past 5 years identified one previous event that involved a similar underlying cause of the event reported under this Licensee Event Report. This event is documented in LER 2024-01, Safety Injection Tank Vent Line Through Wall Leakage, dated February 13, 2024. The cause of that event was stresses resulting fatigue crack initiation and propagation.