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Docket No.: 50-364

NL-20-1331

U. S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, D. C. 20555-0001

Joseph M. Farley Nuclear Plant - Unit 2  
Licensee Event Report 2020-002-00  
Pressurizer Safety Valve Lift Pressure Outside of  
Technical Specifications Limits due to Setpoint Drift

Ladies and Gentlemen:

In accordance with the requirements of 10 CFR 50.73(a)(2)(i)(B), Southern Nuclear Company is submitting the enclosed Licensee Event Report for Unit 2.

This letter contains no NRC commitments. If you have any questions regarding this submittal, please contact Thomas Campbell at (334) 661-2673.

Respectfully submitted,

Charles Kharrl  
Vice President – Farley

CK/tec/cbg

Enclosure: Unit 2 Licensee Event Report 2020-002-00

Cc: Regional Administrator, Region II  
NRR Project Manager – Farley Nuclear Plant  
Senior Resident Inspector – Farley Nuclear Plant  
RTYPE: CFA04.054

**Joseph M. Farley Nuclear Plant - Unit 2  
Licensee Event Report 2020-002-00  
Pressurizer Safety Valve Lift Pressure Outside of  
Technical Specifications Limits due to Setpoint Drift**

**Enclosure**

**Unit 2 Licensee Event Report 2020-002-00**



**LICENSEE EVENT REPORT (LER)**

(See Page 3 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 e-mail 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 all: [oir\\_submission@omb.eop.gov](mailto:oir_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.

<b>1. Facility Name</b> Joseph M. Farley Nuclear Plant, Unit 2	<b>2. Docket Number</b> 05000 364	<b>3. Page</b> 1 OF 2
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**4. Title**  
Pressurizer Safety Valve Lift Pressure Outside of Technical Specifications Limits Due to Setpoint Drift

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	Docket Number
10	28	2020	2020	- 002 -	00	12	21	2020	Facility Name	05000
									Facility Name	Docket Number
										05000

**9. Operating Mode** N      **10. Power Level** 000

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

<b>10 CFR Part 20</b>	<input type="checkbox"/> 20.2203(a)(2)(vi)	<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"/> 20.2201(b)	<input type="checkbox"/> 20.2203(a)(3)(i)	<input type="checkbox"/> 50.46(a)(3)(ii)	<input type="checkbox"/> 50.73(a)(2)(v)(A)	<b>10 CFR Part 73</b>
<input type="checkbox"/> 20.2201(d)	<input type="checkbox"/> 20.2203(a)(3)(ii)	<input type="checkbox"/> 50.69(g)	<input type="checkbox"/> 50.73(a)(2)(v)(B)	<input type="checkbox"/> 73.71(a)(4)
<input type="checkbox"/> 20.2203(a)(1)	<input type="checkbox"/> 20.2203(a)(4)	<input type="checkbox"/> 50.73(a)(2)(i)(A)	<input type="checkbox"/> 50.73(a)(2)(v)(C)	<input type="checkbox"/> 73.71(a)(5)
<input type="checkbox"/> 20.2203(a)(2)(i)	<b>10 CFR Part 21</b>	<input checked="" type="checkbox"/> 50.73(a)(2)(i)(B)	<input type="checkbox"/> 50.73(a)(2)(v)(D)	<input type="checkbox"/> 73.77(a)(1)(i)
<input type="checkbox"/> 20.2203(a)(2)(ii)	<input type="checkbox"/> 21.2(c)	<input type="checkbox"/> 50.73(a)(2)(i)(C)	<input type="checkbox"/> 50.73(a)(2)(vii)	<input type="checkbox"/> 73.77(a)(2)(i)
<input type="checkbox"/> 20.2203(a)(2)(iii)	<b>10 CFR Part 50</b>	<input type="checkbox"/> 50.73(a)(2)(ii)(A)	<input type="checkbox"/> 50.73(a)(2)(viii)(A)	<input type="checkbox"/> 73.77(a)(2)(ii)
<input type="checkbox"/> 20.2203(a)(2)(iv)	<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"/> 20.2203(a)(2)(v)	<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)	

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

**12. Licensee Contact for this LER**

<b>Licensee Contact</b> Thomas Campbell, Licensing Engineer	<b>Phone Number (Include area code)</b> 334-661-2673
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**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
X	AB	RV	C710	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 1560 spaces, i.e., approximately 15 single-spaced typewritten lines)

On October 28, 2020, while at 0% power level and defueled, it was discovered that a Unit 2 pressurizer safety valve (PSV), which had been removed during the October 2020 refueling outage (2R27) and shipped off-site for testing, failed its as-found lift pressure test. The PSV lifted conservatively early, 4 psig below the Technical Specification (TS) 3.4.10 allowable lift setting value. Setpoint drift is the cause of the PSV failure due to spring relaxation.

It is likely that the PSV was outside of the TS limits longer than the allowable completion times for the associated Required Action Statements during the previous operating cycle in all applicable modes of operation. Therefore, this condition is being reported in accordance with 10 CFR 50.73(a)(2)(i)(B) as a condition prohibited by TS.

The PSV was replaced during the October 2020 refueling outage.



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

(See NUREG-1022, R.3 for instruction and guidance for completing this form  
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1. FACILITY NAME	2. DOCKET NUMBER	3. LER NUMBER		
		YEAR	SEQUENTIAL NUMBER	REV NO.
Joseph M. Farley Nuclear Plant, Unit 2	05000- 364	2020	002	00

**NARRATIVE**

**EVENT DESCRIPTION:**

During the Unit 2 October 2020 refueling outage (2R27), while at 0% power level and defueled, with the Reactor Coolant System (RCS) [EII:AB] at atmospheric pressure and 85 degrees Fahrenheit, a pressurizer safety valve (PSV) [EII:AB:RV] was removed as part of the routine In-Service Testing (IST) program and sent to an off-site testing facility. On October 28, 2020 the site was notified that the as-found lift pressure was discovered to be 2456 psig which is outside of the Technical Specification (TS) 3.4.10 allowable lift pressure settings of  $\geq 2460$  psig and  $\leq 2510$  psig. The tested valve was within the ASME code acceptance band of  $\pm 3\%$  (2411-2559 psig). Based on the lift pressure meeting the IST program (ASME code) monitored requirements, there was no IST scope expansion for the PSVs.

**EVENT ANALYSIS:**

Setpoint Drift of the PSV (Manufacturer: Crosby, Model Number: HB-86-BP, Serial Number: N56963-01-0012) due to spring relaxation was determined to be the cause of the failure.

**REPORTABILITY AND SAFETY ASSESSMENT:**

This failure constitutes a condition that is reportable pursuant to 10 CFR 50.73(a)(2)(i)(B), "Any operation or condition which was prohibited by the plant's Technical Specifications." There is no firm evidence, prior to the time of discovery at the test facility, of when the failure occurred. Since the as-found lift setpoint was lower than the allowed value in the TS, the condition did not have an adverse impact on its over-pressurization function. This is within the safety analysis assumptions that are credited for PSVs, and the plant remained bounded by the accident analyses in the Final Safety Analysis Report (FSAR). Therefore, this condition had no significant effect on the health and safety of the public. There was no release of radioactivity.

**CORRECTIVE ACTIONS:**

The PSV was replaced on October 24, 2020 during the 2R27 refueling outage. The as-left setpoints were within  $\pm 1\%$  tolerance. Based on previous events Farley has initiated further corrective actions including a spring replacement schedule for all PZR Safety Valves.

**PREVIOUS SIMILAR EVENTS:**

Similar events were reported for Unit 1 in LER 2018-001-00, and LER 2019-001 and for Unit 2 in LER 2017-003-00

**OTHER SYSTEMS AFFECTED:**

No other systems were affected by this event.