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JUN 1 2 2018

Docket No.: 50-348

NL-18-0801

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

Joseph M. Farley Nuclear Plant - Unit 1
Licensee Event Report 2018-001-00
Pressurizer Safety Valve Lift Pressure Outside of
Technical Specifications Limits due to Spring Relaxation

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 1.

This letter contains no NRC commitments. If you have any questions regarding this submittal, please contact Mandy Ludlam at (334) 814-4930.

Respectfully submitted,

D. R. Madison
Vice President – Farley

DRM/mml/cbg

Enclosure: Unit 1 Licensee Event Report 2018-001-00

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 1
Licensee Event Report 2018-001-00
Pressurizer Safety Valve Lift Pressure Outside of Technical Specifications Limits due to Spring Relaxation

Enclosure

Unit 1 Licensee Event Report 2018-001-00

NRC FORM 366
(04-2018)

U.S. NUCLEAR REGULATORY COMMISSION

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/)

APPROVED BY OMB: NO. 3150-0104 EXPIRES: 03/31/2020

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 Information Services Branch (T-2 F43), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by e-mail to Infocollects.Resource@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	2. Docket Number	3. Page
Joseph M. Farley Nuclear Plant, Unit 1	05000 348	1 OF 2

4. Title

Pressurizer Safety Valve Lift Pressure Outside of Technical Specifications Limits due to Spring Relaxation

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 05000
04	16	2018	2018	- 001 -	00	06	12	2018	Facility Name	Docket Number 05000

9. Operating Mode	11. This Report is Submitted Pursuant to the Requirements of 10 CFR §: *(Check all that apply)*			
N	☐ 20.2201(b)	☐ 20.2203(a)(3)(i)	☐ 50.73(a)(2)(ii)(A)	☐ 50.73(a)(2)(viii)(A)
	☐ 20.2201(d)	☐ 20.2203(a)(3)(ii)	☐ 50.73(a)(2)(ii)(B)	☐ 50.73(a)(2)(viii)(B)
	☐ 20.2203(a)(1)	☐ 20.2203(a)(4)	☐ 50.73(a)(2)(iii)	☐ 50.73(a)(2)(ix)(A)
	☐ 20.2203(a)(2)(i)	☐ 50.36(c)(1)(i)(A)	☐ 50.73(a)(2)(iv)(A)	☐ 50.73(a)(2)(x)
10. Power Level	☐ 20.2203(a)(2)(ii)	☐ 50.36(c)(1)(ii)(A)	☐ 50.73(a)(2)(v)(A)	☐ 73.71(a)(4)
000	☐ 20.2203(a)(2)(iii)	☐ 50.36(c)(2)	☐ 50.73(a)(2)(v)(B)	☐ 73.71(a)(5)
	☐ 20.2203(a)(2)(iv)	☐ 50.46(a)(3)(ii)	☐ 50.73(a)(2)(v)(C)	☐ 73.77(a)(1)
	☐ 20.2203(a)(2)(v)	☐ 50.73(a)(2)(i)(A)	☐ 50.73(a)(2)(v)(D)	☐ 73.77(a)(2)(i)
	☐ 20.2203(a)(2)(vi)	☑ 50.73(a)(2)(i)(B)	☐ 50.73(a)(2)(vii)	☐ 73.77(a)(2)(ii)
		☐ 50.73(a)(2)(i)(C)	☐ Other (Specify in Abstract below or in NRC Form 366A)	

12. Licensee Contact for this LER

Licensee Contact	Telephone Number (Include Area Code)
Mandy Ludlam, Licensing Engineer	(334) 814-4930

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

Cause	System	Component	Manufacturer	Reportable to ICES	Cause	System	Component	Manufacturer	Reportable to ICES
B	AB	RV	C710	Y					

14. Supplemental Report Expected	15. Expected Submission Date	Month	Day	Year
☐ Yes (If yes, complete 15. Expected Submission Date) ☑ No				

Abstract (Limit to 1400 spaces, i.e., approximately 14 single-spaced typewritten lines)

On April 16, 2018, while at 0% power level and defueled, it was discovered that a Unit 1 pressurizer safety valve (PSV), which had been removed during the April 2018 refueling outage (1R28) and shipped off-site for testing, failed its as-found lift pressure test. The PSV lifted below the Technical Specification (TS) 3.4.10 allowable lift setting value. Spring relaxation of the PSV is the most likely cause of the failure.

It is likely that the PSV was outside of the TS limits longer than allowable by the Required Action Statement (15 minutes) 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 April 2018 refueling outage.

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/)

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 Information Services Branch (T-2 F43), U. S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by e-mail to Infocollects.Resource@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	2. DOCKET NUMBER	3. LER NUMBER		
		YEAR	SEQUENTIAL NUMBER	REV NO.
Joseph M. Farley Nuclear Plant, Unit 1	05000-348	2018	- 001	- 00

NARRATIVE

EVENT DESCRIPTION:

During the Unit 1 April 2018 refueling outage (1R28), while at 0% power level and defueled, with the Reactor Coolant System (RCS) [AB] at atmospheric pressure and 84 degrees Fahrenheit, a pressurizer safety valve (PSV) [RV] was removed as part of the routine In-Service Testing (IST) program and sent to an off-site testing facility. The as-found lift pressure was discovered to be 2420 psig which was outside of the Technical Specification (TS) 3.4.10 allowable lift pressure settings of >/= 2460 psig and </= 2510 psig. The tested valve was in the ASME code acceptance band of +/- 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 PSV.

EVENT ANALYSIS:

Spring relaxation of the PSV was determined to be the most likely 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. The as-found lift pressure was 2420 psig, and the valve re-closed following the lift. 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.

CORRECTIVE ACTIONS:

The PSV was replaced during the April 2018 refueling outage. The as-left setpoints were within +/- 1% tolerance.

PREVIOUS SIMILAR EVENTS:

Similar events were reported for Unit 1 in LER 2015-004-00 and LER 2016-003-00 and Unit 2 in LER 2017-003-00. The causes of the previous failures were not attributed to spring relaxation; therefore, the previous events do not appear to be significant in relation to the subject event.

OTHER SYSTEMS AFFECTED:

No other systems were affected by this event.