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Docket Nos.: 50-348

NL-16-2478

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

Joseph M. Farley Nuclear Plant – Unit 1  
Licensee Event Report 2016-003-00  
Pressurizer Safety Valve Setpoint Pressure Outside of  
Technical Specification Tolerance Band

Ladies and Gentlemen:

This Licensee Event Report is being submitted pursuant to the requirements of the Code of Federal Regulations, 10 CFR 50.73(a)(2)(i)(B), for a condition prohibited by Technical Specifications.

This letter contains no NRC commitments. If you have any questions regarding the submittal, please contact Ms. Julie Collier at (334) 814-4639.

Sincerely,

Ms. C. A. Gayheart  
Vice President – Farley

CAG/JAC

Enclosure: Unit 1 Licensee Event Report 2016-003-00

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cc: Southern Nuclear Operating Company

Mr. S. E. Kuczynski, Chairman, President & CEO

Mr. D. G. Bost, Executive Vice President & Chief Nuclear Officer

Mr. M. D. Meier, Vice President – Regulatory Affairs

Mr. D. R. Madison, Vice President – Fleet Operations

Mr. B. J. Adams, Vice President – Engineering

Mr. C. R. Pierce, Regulatory Affairs Director

Ms. B. L. Taylor, Regulatory Affairs Manager – Farley

Mr. K. D. Miller, Operating Experience Coordinator - Farley

RTYPE: CFA04.054

U. S. Nuclear Regulatory Commission

Ms. C. Haney, Regional Administrator

Mr. S. A. Williams, NRR Project Manager - Farley

Mr. P. K. Niebaum, Senior Resident Inspector - Farley

Enclosure

Joseph M. Farley Nuclear Plant – Unit 1  
Unit 1 Licensee Event Report 2016-003-00  
NL-16-2478

Pressurizer Safety Valve Setpoint Pressure Outside  
of Technical Specification Tolerance Band



**LICENSEE EVENT REPORT (LER)**

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 and Information Collections Branch (T-5 F53), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to [Infocollections.Resource@nrc.gov](mailto:Infocollections.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.

<b>1. FACILITY NAME</b>		<b>2. DOCKET NUMBER</b>		<b>3. PAGE</b>	
Joseph M. Farley Nuclear Plant, Unit 1		05000 - 348		1 OF 3	

**4. TITLE**  
Pressurizer Safety Valve Setpoint Pressure Outside of Technical Specification Tolerance Band

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
10	13	2016	2016	003	00	12	12	2016		
									FACILITY NAME	DOCKET NUMBER
									FACILITY NAME	DOCKET NUMBER

<b>9. OPERATING MODE</b>  Defueled	<b>11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check all that apply)</b>										
	<input type="checkbox"/> 20.2201(b)			<input type="checkbox"/> 20.2203(a)(3)(i)			<input type="checkbox"/> 50.73(a)(2)(ii)(A)			<input type="checkbox"/> 50.73(a)(2)(viii)(A)	
	<input type="checkbox"/> 20.2201(d)			<input type="checkbox"/> 20.2203(a)(3)(ii)			<input type="checkbox"/> 50.73(a)(2)(ii)(B)			<input type="checkbox"/> 50.73(a)(2)(viii)(B)	
	<input type="checkbox"/> 20.2203(a)(1)			<input type="checkbox"/> 20.2203(a)(4)			<input type="checkbox"/> 50.73(a)(2)(iii)			<input type="checkbox"/> 50.73(a)(2)(ix)(A)	
<b>10. POWER LEVEL</b>  0%	<input type="checkbox"/> 20.2203(a)(2)(i)			<input type="checkbox"/> 50.36(c)(1)(i)(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)(ii)			<input type="checkbox"/> 50.36(c)(1)(ii)(A)			<input type="checkbox"/> 50.73(a)(2)(v)(A)			<input type="checkbox"/> 73.71(a)(4)	
	<input type="checkbox"/> 20.2203(a)(2)(iii)			<input type="checkbox"/> 50.36(c)(2)			<input type="checkbox"/> 50.73(a)(2)(v)(B)			<input type="checkbox"/> 73.71(a)(5)	
	<input type="checkbox"/> 20.2203(a)(2)(iv)			<input type="checkbox"/> 50.46(a)(3)(ii)			<input type="checkbox"/> 50.73(a)(2)(v)(C)			<input type="checkbox"/> 73.77(a)(1)	
	<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)(D)			<input type="checkbox"/> 73.77(a)(2)(i)	
	<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)(vii)			<input type="checkbox"/> 73.77(a)(2)(ii)	
<input type="checkbox"/> 50.73(a)(2)(i)(C) <input type="checkbox"/> OTHER Specify in Abstract below or in NRC Form 366A											

12. LICENSEE CONTACT FOR THIS LER	
LICENSEE CONTACT <b>Julie Collier, Licensing Engineer</b>	TELEPHONE NUMBER (Include Area Code) <b>334-814-4639</b>

13. COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT									
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX
E	SB	RV	C710	Y					

<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

**ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines)**

On 10/13/2016 it was discovered that a Unit 1 pressurizer safety valve (PSV), which had been removed during the October 2016 refueling outage and shipped offsite for testing, failed its as-found lift test. The PSV lifted below the Technical Specification (TS) 3.4.10 allowable lift setting value. Seat leakage of the PSV is the most likely cause of the setpoint drift.

It is likely that the PSV was outside the TS limits longer than allowed by the Required Action Statement (15 minutes) during the Cycle 27 applicable modes of operation. Therefore, this condition is being reported in accordance with 10 CFR 50.73(a)(2)(i)(B) for a condition which was prohibited by the plant's Technical Specifications.

The PSV was replaced during the October 2016 refueling outage.



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

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1. FACILITY NAME	2. DOCKET NUMBER		3. LER NUMBER		
			YEAR	SEQUENTIAL NUMBER	REV NO.
Joseph M. Farley Nuclear Plant, Unit 1	05000-	348	2016	- 003 -	(0)

**NARRATIVE**

**A. PLANT AND SYSTEM IDENTIFICATION**

Westinghouse - Pressurized Water Reactor

**B. DESCRIPTION OF EVENT**

During the Unit 1 October 2016 refueling outage (1R27) the Pressurizer Safety Valve (PSV) was removed as part of the routine inservice inspection testing program and sent to an offsite testing facility. The as found lift pressure for this PSV was discovered to be 2443 psig which was outside of Technical Specification (TS) 3.4.10 allowable lift settings of  $\geq 2460$  psig and  $\leq 2510$  psig.

During cycle 27 there were no indications of seat leakage from this PSV as evidenced by tailpipe temperature indication. However, during 1R27 a small amount of boric acid was evident when the valve was removed for valve testing and dismantled during the outage, indicating some leakage had occurred during the cycle. Data from the plant trip on 10/1/2016 was reviewed and there was no indication that any of the pressurizer safety valves lifted during the transient. The primary system response was considered to be normal following the plant trip. There were also no transients during the cycle that would have caused the PSVs to lift.

**C. UNIT STATUS AT TIME OF EVENT**

Unit 1, Defueled  
Unit 2, Mode 1, 100 percent power

**D. CAUSE OF EVENT**

Seat leakage of the PSV is the most likely cause of the setpoint drift.

**E. REPORTABILITY ANALYSIS 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." Based upon a review of relevant information (e.g., equipment history and the cause of failure), there is no firm evidence of when the failure to meet the lift setting requirements occurred prior to the time of discovery at the test facility. The setpoint could have drifted below the allowable value at any time between startup from 1R26 and the time of discovery.

Since the as found lift setpoint was lower than the allowed value in the Technical Specifications, the condition did not have an adverse impact on over pressurization, and the valve continued to perform its overpressure protection function. The as found lift pressure was 2443 psig and the valve reclosed following the lift. This is within the safety analysis assumptions that are credited for Pressurizer Safety Valves, and the plant remained bounded by the accident analyses in the FSAR. Therefore, this condition had no significant effect on the health and safety of the public.

The inservice testing (IST) requirement of plus or minus 3% of 2485 psig (2411 – 2559 psig) was met.



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**NARRATIVE**

**F. CORRECTIVE ACTION**

The PSV was replaced during the October 2016 refueling outage. An additional PSV that was removed for routine IST requirements was tested satisfactorily. The setpoints were left at plus or minus 1% tolerance.

**G. ADDITIONAL INFORMATION**

- 1) Failed Components: Pressurizer safety valve
- 2) Previous Similar Events: A similar event was reported for Unit 1 LER 2015-004-00. For that event, there had been indication of seat leakage during the previous operating cycle based on elevated tailpipe temperatures. This was not seen in this event.
- 3) Other system affected: No systems other than those mentioned in this report were affected by this event.
- 4) Commitment Information: This report does not create any licensing commitments
- 5) Energy Industry Identification System Code:  
[SB]