



May 20, 2021
10 CFR 50.73
SBK-L-21053

U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555-0001

Seabrook Station
Docket No. 50-443

Seabrook Station
Licensee Event Report (LER) 2021-001-00
Pressurizer Safety Valve Outside of Technical Specification Limits Discovered During
As-Found Set Point Testing

Enclosed is Licensee Event Report (LER) 2021-001-00. This LER reports an event that occurred at Seabrook Station on March 25, 2021. This event is being reported pursuant to the requirements of 10 CFR 50.73(a)(2)(i)(B).

Should you require further information regarding this matter, please contact me at (603) 773-7631.

Sincerely,

NextEra Energy Seabrook, LLC

A handwritten signature in black ink, appearing to read "Matthew Levander", written over a horizontal line.

Matthew Levander
Licensing Manager

cc: D. Lew, NRC Region I Administrator
J. Poole, NRC Project Manager
C. Newport, NRC Senior Resident Inspector

Enclosure to SBK-L-21053



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, and the OMB reviewer at: OMB Office of Information and Regulatory Affairs, (3150-0104), Attn: Desk a/c: 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
Seabrook Station

2. Docket Number

05000

443

3. Page

1 OF 3

4. Title
Pressurizer Safety Valve Outside of Technical Specification Limits Discovered During As-Found Set Point Testing

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
03	25	2021	2021	- 001 -	00	05	24	2021		05000
									Facility Name	Docket Number
										05000

9. Operating Mode

1

10. Power Level

100

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 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)	<input checked="" type="checkbox"/> 10 CFR Part 73
<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)	<input checked="" type="checkbox"/> 10 CFR Part 21	<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)	<input checked="" type="checkbox"/> 10 CFR Part 50	<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)	
<input type="checkbox"/> OTHER (Specify here, in abstract, or NRC 366A).				

12. Licensee Contact for this LER

Licensee Contact

Matthew Levander, Licensing Manager

Phone Number (Include area code)

603-773-7631

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	C711	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 March 25, 2021, with Seabrook Station at 100% power, it was determined that one of the three Pressurizer Safety Valves (PSVs) had a low as-found set point pressure which was discovered during off site testing after the valve was removed from service during the previous refueling outage (04/01/20). Technical Specifications (TS) require three pressurizer safety valves to be operable, with a lift setting of +/- 3% in Modes 1, 2, and 3. One safety valve had an as-found set point of -4.2%, the other two were within the +/- 3% allowable tolerance. The cause of the set point pressure being out of the allowable band is attributed to set point drift. The planned Corrective Action is to replace the spring. Following the spring replacement, additional testing will be performed to ensure the valve will be suitable for continued service.

**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

Seabrook Station

2. DOCKET NUMBER

05000-

443

3. LER NUMBER**YEAR**

2021

**SEQUENTIAL
NUMBER**

001

**REV
NO.**

00

NARRATIVE**Event Description:**

During testing of the Pressurizer Safety Valves (PSV) (EEIS: RV) performed by an off-site vendor, the as-found set point for one of the three PSVs removed during the station's most recent refueling outage did not meet the Technical Specifications (TS) 3.4.2.2 requirement of being with +/- 3% of design lift pressure. The subject PSV had an as-found set point pressure that was -4.2%, which was validated on March 25, 2021. The PSV was last installed in the plant and returned to service from October 25, 2018 (Mode 4, power ascension after refueling outage), until April 01, 2020 (Mode 5, entering refueling outage) when it was then removed from service.

TS 3.4.2.2 has an action statement completion time of 15 minutes for one Inoperable Pressurizer Code Safety Valve, after which the plant must be in Hot Standby within 6 hours, and in at least Hot Shutdown within the following 6 hours. Since it is assumed the condition existed prior to the as-found testing, and for a duration longer than the TS action completion time, it is assumed that the condition existed greater than the allowed out of service time and completion time. This event is being reported in accordance with 50.73(a)(2)(i)(B), "Any operation or condition which was prohibited by the plant's Technical Specifications."

Safety Consequences:

There were no actual safety consequences for this event. No safety system responses occurred.

A review of station parameters was completed and determined the actual Reactor Coolant System (RCS)(EEIS:AB) pressure was within normal operating limits and the Pressurizer Safety Valves were not required to open to mitigate an overpressure event during Cycle 20. At no point did the RCS pressure reach the as-found set point of 2380 PSIG. As the set point is below the required Technical Specification range of 2485 +/- 3%, it would have provided overpressure protection. As the valve never lifted during the cycle, it did not have a negative effect on actual plant operation. The condition was identified after the valve was removed from service, at an off site testing facility.

Cause of Event:

Disassembly, inspection, and spring testing of the valve following the unsatisfactory test was performed at the vendor testing facility. All qualifying spring test and measurement data, as well as visual inspection notes were within prescribed acceptance criteria. Although the acceptance criteria was met, notable changes were evident in the measurement data between the 2015 spring tests and the 2021 spring tests. While acceptable, the vendor indicated that these changes between spring tests over time are not typical and may be indicative of changes to the material characteristics of the spring which could potentially correlate with inconsistent lift results. A combination of minor changes such as these over time, when not alongside of a single clear cause of a valve set point failure, is commonly considered "set point drift." The cause of this event is being attributed to set point drift.

Corrective Actions:

The planned Corrective Action is to replace the PSV spring. After the new spring is installed, testing of the valve will recur to ensure that is suitable to be placed back in service.



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YEAR

2021

SEQUENTIAL
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001

REV
NO.

00

NARRATIVE

Previous Similar Events:

A similar event occurred at Seabrook Station, documented within Licensee Event Report (LER) Number 2018-001-00, where as-found PSV set point testing occurred and the results exceeded the requirements within the Technical Specifications for a period longer than allowed. The specific valve outlined within LER 2018-001-00 was not the same valve being reported within this LER.

The PSV is manufactured by Crosby Valve and Gage Co., Size 6M6, Style HB-BP 86.