



November 30, 2009

Docket No. 50-443

SBK-L-09248

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

Seabrook Station

Licensee Event Report (LER) 2009-001-00

Reactor Protection System Actuation on Steam Generator Low Water Level

Enclosed is Licensee Event Report (LER) 2009-001-00. This LER reports an event that occurred at Seabrook Station on October 1, 2009. This event is being reported pursuant to the requirements of 10 CFR 50.73(a)(2)(iv)(A).

Should you require further information regarding this matter, please contact Mr. Michael O'Keefe, Licensing Manager at (603) 773-7745.

Sincerely,

NextEra Energy Seabrook, LLC

A handwritten signature in black ink, appearing to read "Gene St. Pierre".

Gene St. Pierre
Vice President North

cc: S. J. Collins, NRC Region I Administrator
D. L. Egan, NRC Project Manager
W. J. Raymond, NRC Senior Resident Inspector

JE22
NRR

LICENSEE EVENT REPORT (LER)

(See reverse for required number of digits/characters for each block)

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 Records and FOIA/Privacy Service Branch (T-5 F52), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to infocollects@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NE0B-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 Seabrook Station	2. DOCKET NUMBER 0500 0443	3. PAGE 1 OF 3
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4. TITLE
Reactor Protection System Actuation on Steam Generator Low Water Level

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	01	2009	2009	- 001 -	00	11	30	2009		05000
									FACILITY NAME	DOCKET NUMBER
										05000

9. OPERATING MODE 4	11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR§: (Check all that apply)									
10. POWER LEVEL 000	<input type="checkbox"/> 20.2201(b)	<input type="checkbox"/> 20.2203(a)(3)(i)	<input type="checkbox"/> 50.73(a)(2)(i)(C)	<input type="checkbox"/> 50.73(a)(2)(vii)						
	<input type="checkbox"/> 20.2201(d)	<input type="checkbox"/> 20.2203(a)(3)(ii)	<input type="checkbox"/> 50.73(a)(2)(ii)(A)	<input type="checkbox"/> 50.73(a)(2)(viii)(A)						
	<input type="checkbox"/> 20.2203(a)(1)	<input type="checkbox"/> 20.2203(a)(4)	<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)(i)	<input type="checkbox"/> 50.36(c)(1)(i)(A)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(ix)(A)						
	<input type="checkbox"/> 20.2203(a)(2)(ii)	<input type="checkbox"/> 50.36(c)(1)(ii)(A)	<input checked="" type="checkbox"/> 50.73(a)(2)(iv)(A)	<input type="checkbox"/> 50.73(a)(2)(x)						
	<input type="checkbox"/> 20.2203(a)(2)(iii)	<input type="checkbox"/> 50.36(c)(2)	<input type="checkbox"/> 50.73(a)(2)(v)(A)	<input type="checkbox"/> 73.71(a)(4)						
	<input type="checkbox"/> 20.2203(a)(2)(iv)	<input type="checkbox"/> 50.46(a)(3)(ii)	<input type="checkbox"/> 50.73(a)(2)(v)(B)	<input type="checkbox"/> 73.71(a)(5)						
	<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)(C)	<input type="checkbox"/> OTHER						
	<input type="checkbox"/> 20.2203(a)(2)(vi)	<input type="checkbox"/> 50.73(a)(2)(i)(B)	<input type="checkbox"/> 50.73(a)(2)(v)(D)							
	Specify in Abstract below or in NRC Form 366A									

12. LICENSEE CONTACT FOR THIS LER

FACILITY NAME Michael O'Keefe, Licensing Manager	TELEPHONE NUMBER (Include Area Code) 603-773-7745
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13. COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT

CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX

14. SUPPLEMENTAL REPORT EXPECTED <input type="checkbox"/> YES (If yes, complete 15. EXPECTED SUBMISSION DATE) <input checked="" type="checkbox"/> NO	15. EXPECTED SUBMISSION DATE	MONTH	DAY	YEAR

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

On October 1, 2009 at approximately 2241 EDT with the plant in Mode 4 at approximately 260 degrees, actuation of the reactor protection system (RPS) resulted from low water levels in steam generators (SG) A and C. Inadequate monitoring and control of SG levels while performing a plant cooldown resulted in SG levels decreasing below the reactor trip setpoint of 20% narrow range level, which caused an actuation of the RPS. By 2307, the operators restored levels in the affected SGs to greater than 20%. This valid actuation of the RPS did not actuate any plant components because the reactor trip breakers were already open and the emergency feedwater system was removed from service. No adverse consequences resulted from this event. The root cause of the event was attributed to liberal expectations and standards for implementing procedures that direct major plant evolutions, which led to the operating crew's failure to assess potential risks associated with performing a plant cooldown without placing the residual heat removal system in service. The planned corrective actions include remediation for the operator and revising the standards for implementing procedures for major plant evolutions.

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

1. FACILITY NAME	2. DOCKET	6. LER NUMBER			3. PAGE
Seabrook Station	0500-0443	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	2 OF 3
		2009	- 001	- 00	

17. NARRATIVE (If more space is required, use additional copies of NRC Form 366A) (17)

I. Description of Event

On October 1, 2009 at approximately 2241 EDT with the plant in Mode 4 at approximately 260 degrees, actuation of the reactor protection system (RPS) [JC] resulted from low water levels in steam generators (SG) [AB, SG] A and C. Inadequate monitoring and control of SG levels while performing a plant cool down resulted in SG levels decreasing below the reactor trip setpoint of 20% narrow range level, which caused an actuation of the RPS. This valid actuation of the RPS did not actuate any plant components because the reactor trip breakers [AA, 52] were already open and the emergency feedwater system [BA] was removed from service.

II. Cause of Event

The control room operator's failure to adequately monitor and control SG levels during a plant cooldown was the direct cause of this event. The root cause was attributed to the Operations Department's liberal expectations and standards for implementation of certain procedures that direct major plant evolutions, which led to the operating crew's failure to assess potential risks associated with performing a plant cooldown without placing the residual heat removal (RHR) [BP] system in service. The Operations Department's practice when implementing major plant evolution procedures was to perform procedure steps out of sequence. In this event, performing procedure steps out of sequence led the operators to make adjustments to SG levels, which otherwise would not have been required. The RPS actuation on low SG levels occurred while making the SG level adjustments.

III. Analysis of Event

At the time of the event, the plant was in mode 4 at approximately 260 degrees with both trains of the RHR system out of service. Although the plant cooldown procedure directs starting the RHR system when reactor coolant system (RCS) temperature is less than 350 degrees, the RHR system had not yet been placed in operation at 260 degrees. The delay in starting the RHR system resulted from the need to evaluate a recently identified indication of a flaw in the train-A RHR piping and to remove a gas void in the train-B RHR suction piping. As a result, the operators postponed performing the step to place the RHR system in operation. Because the RHR system was not in operation, the operators also postponed a subsequent procedure step to stop one of the remaining two operating reactor coolant pumps (RCP) [AB, P]. The plant cooldown from 350 degrees to 260 degrees continued by operating reactor coolant pumps A and C and steaming the associated SGs. As RCS temperature approached 250 degrees, the operators reduced SG levels to 35% narrow range in accordance with the plant procedure.

In preparing to shut down one RCP, the operators took action to increase SG levels to accommodate any level decrease that might accompany stopping the RCP. During the attempt to raise SG levels, the control room operator failed to adequately monitor SG levels and control feedwater flow, resulting in SG levels decreasing to less than 8% before they were recovered.

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17. NARRATIVE (If more space is required, use additional copies of NRC Form 366A) (17)

This event resulted in a valid actuation of the RPS and met the reporting criterion of 10CFR50.72(b)(3)(iv)(A). An eight-hour report (event # 45403) was made to the NRC at 0418 on October 2, 2009. This event is of regulatory significance because it resulted in the actuation of a system provided to mitigate the consequences of an accident.

This event had no adverse impact on the plant or on the health and safety of the public. No equipment was actuated following actuation of the RPS and no consequences resulted from the event. No inoperable structures, systems, or components contributed to this event. This condition did not involve a Safety System Functional Failure.

IV. Corrective Action

The planned corrective actions for this event include: (1) remediation for the control room operator who failed to adequately monitor and control SG levels, (2) revising the Operations department's expectations document to address procedure compliance with major plant evolution procedures, (3) discussing in operator training procedure compliance expectations with a review of this event, and (4) revising the major plant evolution procedures so that the procedure strategy is maintained by specifically identifying steps that may be performed in parallel or out of sequence.

V. Additional Information

The Energy Industry Identification System (EIIS) codes are included in this LER in the following format: [EIIS system identifier, EIIS component identifier].

VI. Similar Events

A review of LERs for the last five years found no other occurrences of an engineered safety features system actuation as a result of inappropriate procedure implementation.