



June 8, 2010

10 CFR 50.73

Docket No. 50-443

SBK-L-10103

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

Seabrook Station

Licensee Event Report (LER) 2010-002-00

Containment Penetration Protective Devices Found Inoperable

Enclosed is Licensee Event Report (LER) 2010-002-00. This LER reports an event that was discovered at Seabrook Station on April 9, 2010. 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 Mr. Michael O'Keefe, Licensing Manager, at (603) 773-7745.

Sincerely,

NextEra Energy Seabrook, LLC

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

Paul Freeman
Site Vice President

cc: S. J. Collins, NRC Region I Administrator
G. E. Miller, 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, 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.

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4. TITLE Containment Penetration Protective Devices Found Inoperable

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
04	09	2010	2010	- 002 -	00	06	08	2010	N/A	05000
									N/A	05000

9. OPERATING MODE 1	11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR§: (Check all that apply)									
10. POWER LEVEL 100	<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)(vii)(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 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 checked="" 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 YES (If yes, complete 15. EXPECTED SUBMISSION DATE) X NO	15. EXPECTED SUBMISSION DATE	MONTH	DAY	YEAR

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

On April 9, 2010 during operation in Mode 1 at 100% power, the instantaneous trip setpoints for the containment penetration conductor overcurrent protective devices for the train-B hydrogen recombiner were found at incorrect settings. Both the primary and secondary protective device trip setpoints were set at 8.75x (equal to 1094 amps) rather than the design value of 6.25x (equal to 781 amps). Following this discovery, the protective devices were reset to their correct setpoints. Technical Specification (TS) 3.8.4.2, Electrical Equipment Protective Devices, confirms operability of the protective devices by verifying the devices trip when current is injected within a specified range of the trip setpoint. A review of test data found that the protective devices failed this surveillance requirement (SR) in May 2004 and April 2008. Therefore, the inoperable protective devices were in service for longer than permitted by the TS. The cause of the overcurrent protective devices being set at incorrect settings was attributed to previously vague procedure guidance. Subsequent revisions clarified the procedure and led to the identification of the incorrect setpoints. Although the protective devices failed to meet the SR, reasonable assurance existed that the devices would have actuated within current levels and response times that would have protected the containment penetration.

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

I. Description of Event

On April 9, 2010 during operation in Mode 1 at 100% power, the instantaneous trip setpoints for the containment penetration conductor overcurrent protective devices [52] for the train-B hydrogen recombiner [BB, RCB] were found at incorrect settings. Both the primary and secondary protective device trip setpoints were set at 8.75x (equal to 1094 amps) rather than the design value of 6.25x (equal to 781 amps). Following this discovery, the protective devices were reset to their correct setpoints. Technical Specification (TS) 3.8.4.2, Electrical Equipment Protective Devices, confirms operability of the protective devices by verifying the devices trip when current is injected within a specified range of the trip setpoint. A review of test data found that the protective devices failed this surveillance requirement (SR) in May 2004 and April 2008. Therefore, the protective devices were in service and inoperable for longer than permitted by the TS.

II. Cause of Event

In a preliminary evaluation, the failure to establish the correct trip setpoints when the breakers were installed and the failure to identify the deficiency during subsequent surveillance tests were attributed to vague guidance in the procedures. Previously, the procedures did not refer the user to the Motor Load List design drawing or verify the trip setpoint of the protective devices.

III. Analysis of Event

The primary and secondary circuit breakers for the hydrogen recombiners are containment penetration conductor overcurrent protective devices. Seabrook Station TS 3.8.4.2 requires operability of these protective devices in Modes 1 through 4. Operability is demonstrated by periodically injecting a test current and verifying that the breakers trip at a current within a specified range of the trip setpoint; the allowable range of trip current is based on the protective device's trip setpoint.

In 2002, the Type JL primary and secondary circuit breakers for the hydrogen recombiners were replaced with Type KD circuit breakers. The design trip setpoint for these replacement breakers is 6.25x (equal to 781 amps), and the range of test current specified for testing at this setpoint is 586 – 976 amps. This range of test current is provided in the Seabrook Station Technical Requirements Manual. A station design drawing, Motor Load List, also provides the trip settings and trip current. This drawing specifies the values for the Type JL breakers and, using a footnote, provides the values for the Type KD breakers.

On April 9, 2010, while performing a routine SR on the train-B hydrogen recombiner circuit breaker, station personnel found the trip setpoints for the primary and secondary breakers incorrectly set at 8.75x (equal to 1094 amps) rather than the design setpoint of 6.25x. Following this discovery, the secondary protective device was reset and satisfactorily tested at the correct setpoint. The setpoint for the primary protective device was also reset to the correct setting; however, this device could not be tested with the plant on-line due to the electrical safety hazard associated with testing the device with the motor control center energized.

A review of this condition concluded that the trip setting for the train-B hydrogen recombiner primary and secondary breakers had been set incorrectly since installation of the replacement breakers in 2002. (The breakers for the train-A hydrogen recombiner were set at the correct setpoint.) However, a review of previous test data indicated that the breakers would have performed their intended function and the electrical penetration would have been protected, even with the trip settings at the incorrect setpoint. Consequently, the breakers

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could have remained operable with the trip setpoints outside their design values if surveillance testing demonstrated that the breakers were performing satisfactorily. With the trip setpoint at 8.75x, the range of test current specified for testing the protective devices is 821 – 1368 amps. Further evaluation of surveillance test data measured in May 2004 found that the secondary breaker failed to meet this acceptance criterion. The measured current was less than the minimum allowable value of 821 amps. Similarly, during testing performed on the primary breaker in April 2008, test data shows that the primary breaker tripped at a current less than the minimum allowable value.

As a result, the primary and secondary containment penetration conductor overcurrent protective devices were inoperable from April 2008 and May 2004, respectively, until discovery of the condition on April 9, 2010. Since the inoperable protective devices remained in service for more than the 72 hours permitted by TS 3.8.4.2, this event is reportable in accordance with 10 CFR 50.73 (a)(2)(i)(B) as a condition prohibited by the TS.

This event is of regulatory importance because it resulted in a condition prohibited by the TS; however, the condition is not significant to safety. Reasonable assurance existed that the circuit breakers would have performed their intended function to protect the penetration. With the trip setpoint at the incorrect trip setpoint of 8.75x, past test data indicated that the circuit breakers operated at current levels and with response times within the capability of the electrical penetration. No adverse consequences resulted from this condition, and the event had no adverse impact on the health and safety of the public or the plant and its personnel. No other structures, systems, or components were inoperable at the start of the event and contributed to this event. This event did not involve a safety system functional failure.

IV. Corrective Action

The trip setpoints for the primary and secondary protective devices were set to their correct setpoints. However, the primary circuit breaker cannot be demonstrated operable until the plant enters an outage so that the motor control center can be de-energized to allow performing the SR on the breaker. As a result, this breaker is removed from service in accordance with the action of TS 3.8.4.2.

The vague procedure guidance that originally contributed to the incorrect trip setpoints has been corrected in subsequent procedure revisions. These procedure changes led to identification of this condition. Nonetheless, additional planned corrective actions include modifying the Motor Load List to remove the reference to the obsolete JL Type circuit breakers and revising the circuit breaker surveillance procedure to provide additional details regarding the adjustable trip setpoints.

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

None