



November 8, 2012

10 CFR 50.73

Docket No. 50-443

SBK-L-12224

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

Seabrook Station

Licensee Event Report (LER) 2012-002-00

Inadequate Testing of Response Time for Reactor Trip Breakers

Enclosed is Licensee Event Report (LER) 2012-002-00. This LER reports an event that was discovered at Seabrook Station on September 25, 2012. 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 "Kevin T. Walsh".

Kevin T. Walsh
Site Vice President

cc: NRC Region I Administrator
J. G. Lamb, NRC Project Manager
NRC Senior Resident Inspector

IE 22
NRR

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 Section (T-5 F53), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet 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: Seabrook Station
 2. DOCKET NUMBER: 05000443
 3. PAGE: 1 OF 3

4. TITLE: Inadequate Testing of Response Time for Reactor Trip Breakers

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
09	25	2012	2012	002	00	11	08	2012		

9. OPERATING MODE: N

10. POWER LEVEL: 000

11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR§: (Check all that apply)

<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 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

NAME: Michael O'Keefe, Licensing Manager
 TELEPHONE NUMBER (Include Area Code): 603-773-7745

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

14. SUPPLEMENTAL REPORT EXPECTED: YES (If yes, complete 15. EXPECTED SUBMISSION DATE) NO

15. EXPECTED SUBMISSION DATE: MONTH: DAY: YEAR:

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

On September 25, 2012 with the unit in a refueling outage and defueled, station personnel, while reviewing a design change for installation of new circuit boards in the solid state protection system, identified a deficiency in the procedure that performs response time testing of the reactor trip breakers (RTB). The RTB have two diverse trip methods: the undervoltage circuit and the shunt trip circuit. When a RTB is opened through the shunt trip circuit, two coils (STA and SH TR) must function in order to open the breaker. A review of the existing test method found that the shunt trip circuits for both RTB had not been adequately tested. Further, a review of previous revisions of the surveillance procedures concluded that the response time of the shunt trip circuit had never been adequately tested.

This event is similar to and has the same cause as the inadequate time response testing reported in LER 2012-001. The cause of both events was ineffective methods utilized in the mid 1980's to verify that surveillance test procedures ensured compliance with the TS. The corrective actions for this condition included revising the surveillance procedure and obtaining response times, which were found to be within acceptable limits. A review of the adequacy of time response testing is ongoing to address the extent of condition. No adverse consequences resulted from this event.

**LICENSEE EVENT REPORT (LER)
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NARRATIVE

Description of Event

On September 25, 2012 with the unit in a refueling outage and defueled, station personnel, while reviewing a design change for installation of new circuit boards in the solid state protection system [JE], identified a deficiency in the procedure that performs response time testing of the reactor trip breakers (RTB) [JC, 52]. The RTB have two diverse trip methods: the undervoltage circuit and the shunt trip circuit. When a RTB is opened through the shunt trip circuit, two coils (STA and SH TR) [JC, RLY] must function in order to open the breaker. A review of the existing test method found that the shunt trip circuits for both RTB had not been adequately tested. Further, a review of previous revisions of the surveillance procedures concluded that the response time of the shunt trip circuit had never been adequately tested.

Cause of Event

This event is similar to and has the same cause as the inadequate time response testing reported September 13, 2012, in LER 2012-001, Inadequate Testing of Certain Emergency Feedwater Actuation System Relays [BA, RLY]. The root cause of the event was that the procedure development process in effect prior to station operation did not require validation of technical bases when surveillance procedures were initially developed. However, current programmatic guidance for procedure development is substantially more robust.

Analysis of the Event

Two separate and independent RTB connected in series provide power to the control rod drive mechanisms. When either of the RTB opens, power is interrupted to the rod drive power supply, and the control rods fall into the core. The RTB have two diverse trip methods: the undervoltage circuit and the shunt trip circuit. When a RTB is opened through the shunt trip circuit, two coils (STA and SH TR) must function in order to open the breaker. During review of a design change for installation of new circuit boards in the solid state protection system, station personnel discovered that the surveillance procedure that performs response time testing of the RTB does not measure the response time of the STA relay in the shunt trip circuit. Further review concluded that the response time of the shunt trip circuit had never been adequately tested. However, surveillance procedures adequately test the response time of the undervoltage trip circuit and perform appropriate functional tests of the undervoltage and shunt trip circuits.

This condition was discovered while the plant was shutdown for a refueling outage. During the outage in October 2012, technicians used a revised procedure to obtain response times for the RTB that included both devices STA and SH TR in the shunt trip circuit. The measured response times were 0.036 second and 0.046 second for RTB A and B, respectively. Because the as-found response times were well below the limit of 0.120 second, this event had no potential safety consequences.

This event met the reporting criterion of 10 CFR 50.73 (a)(2)(i)(B) for a condition prohibited by the TS. However, this event had no adverse impact on the health and safety of the public or the plant and its personnel. Although the response time for the shunt trip circuit of the RTB had never been adequately tested, measurements obtained after discovery of the condition found the response time within acceptable limits. No plant transients, systems actuations, or consequences resulted from this event. This event did not involve a safety system functional failure.

Corrective Actions

The corrective actions for this condition included revising the surveillance procedure and obtaining response times, which were found to be within acceptable limits. A review of the adequacy of time response testing is ongoing to address the extent of condition.

LICENSEE EVENT REPORT (LER)
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NARRATIVE

Similar Events

In March of 2011, Seabrook personnel identified that feedwater isolation on hi-hi steam generator level was not being adequately tested as required by TS 4.3.2.2, which resulted in declaration of a missed surveillance.

LER 2012-001, Inadequate Testing of Certain Emergency Feedwater Actuation System Relays, reported that response time for starting and loading of the motor-driven emergency feedwater pump had not been adequately tested.

Additional Information

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