FPL Energy
Seabrook Station

FPL Energy Seabrook Station
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JUL 27 2006

Docket No. 50-443
SBK-L-06161

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

Seabrook Station
Licensee Event Report (LER) 2006-005-00
Technical Specification Violation with Inoperable Main Steam Isolation Valve

Enclosed is Licensee Event Report (LER) 2006-005-00. This LER reports an event that occurred at Seabrook Station on July 3, 2006. This event is being reported pursuant to the requirements of 10CFR50.73(a)(2)(i)(B) and Facility Operating License Condition 2.G.

Should you require further information regarding this matter, please contact Mr. James M. Peschel, Regulatory Programs Manager, at (603) 773-7194.

Very truly yours,

FPL Energy Seabrook, LLC

for Gene St. Pierre

Gene St. Pierre
Site Vice President

cc: S. J. Collins, NRC Region I Administrator
G. E. Miller, NRC Project Manager, Project Directorate I-2
G. T. Dentel, NRC Senior Resident Inspector

IE22

ENCLOSURE TO SBK-L-06161

NRC FORM 366 (6-2004) U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB: NO. 3150-0104 EXPIRES: 06/30/2007

Estimated burden per response to comply with this mandatory collection request: 50 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.

LICENSEE EVENT REPORT (LER)

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

1. FACILITY NAME	2. DOCKET NUMBER	3. PAGE
Seabrook Station	05000 443	1 OF 3

4. TITLE
Technical Specification Violation with Inoperable Main Steam Isolation Valve

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
										05000
07	03	2006	2006	- 005 -	00	07	27	2006	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)*

☐ 20.2201(b)	☐ 20.2203(a)(3)(i)	☐ 50.73(a)(2)(i)(C)	☐ 50.73(a)(2)(vii)
☐ 20.2201(d)	☐ 20.2203(a)(3)(ii)	☐ 50.73(a)(2)(ii)(A)	☐ 50.73(a)(2)(viii)(A)
☐ 20.2203(a)(1)	☐ 20.2203(a)(4)	☐ 50.73(a)(2)(ii)(B)	☐ 50.73(a)(2)(viii)(B)
☐ 20.2203(a)(2)(i)	☐ 50.36(c)(1)(i)(A)	☐ 50.73(a)(2)(iii)	☐ 50.73(a)(2)(ix)(A)
☐ 20.2203(a)(2)(ii)	☐ 50.36(c)(1)(ii)(A)	☐ 50.73(a)(2)(iv)(A)	☐ 50.73(a)(2)(x)
☐ 20.2203(a)(2)(iii)	☐ 50.36(c)(2)	☐ 50.73(a)(2)(v)(A)	☐ 73.71(a)(4)
☐ 20.2203(a)(2)(iv)	☐ 50.46(a)(3)(ii)	☐ 50.73(a)(2)(v)(B)	☐ 73.71(a)(5)
☐ 20.2203(a)(2)(v)	☐ 50.73(a)(2)(i)(A)	☐ 50.73(a)(2)(v)(C)	☒ OTHER
☐ 20.2203(a)(2)(vi)	☒ 50.73(a)(2)(i)(B)	☐ 50.73(a)(2)(v)(D)	Specify in Abstract below or in NRC Form 366A

12. LICENSEE CONTACT FOR THIS LER

FACILITY NAME	TELEPHONE NUMBER (Include Area Code)
James M. Peschel, Regulatory Programs Manager	603-773-7194

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
X	SB	V	NA	N					

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 July 3, 2006 at 0615, during operation at 100% power, Seabrook Station determined that the unit had been operated in a condition prohibited by the TS for approximately 20 hours. An alarm annunciated in the control room on June 30, 2006 indicating a malfunction of a power supply associated with one MSIV control cabinet. Subsequent troubleshooting identified a problem with a MSIV valve control module. The MSIV was declared inoperable for troubleshooting and replacement of the control module. A subsequent examination of the failed valve control module on July 3 identified both power supply fuses open. This condition would have prevented the control module from functioning and would have rendered the MSIV inoperable. As a result, the MSIV was inoperable from receipt of the control room alarm until the failed valve control module was replaced, a duration of approximately 20 hours. The plant operated at full power during this time while the TS allow only four hours to restore a MSIV to operable status before requiring a plant shutdown or closure of the MSIV. Consequently, this event resulted in a condition prohibited by the TS. The cause of the MSIV power supply malfunction was a random failure of the MSIV control module printed circuit board. The control module was replaced and the MSIV made operable. No adverse consequences resulted from this event.

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

I. Description of Event

On July 3, 2006 at 0615, during operation at 100% power, Seabrook Station determined that the unit had been operated in a condition prohibited by the Technical Specifications (TS). Specifically, at 1949 on June 30, 2006, an alarm annunciated in the Main Control Room indicating a malfunction of a power supply associated with the control cabinet that contains the Train A controls for two Main Steam Isolation Valves (MSIV) [SB, V]. Subsequent troubleshooting identified a problem with the valve control module for Train A MSIV (MS-V88). The MSIV was declared inoperable on July 1 at 1318 to facilitate additional troubleshooting and eventual replacement of the failed control module. Following replacement of the module the MSIV was declared operable on July 1 at 1559. A subsequent examination of the failed valve control module on July 3 identified both power supply fuses open. This condition would have prevented the control module from functioning and would have rendered the MSIV inoperable. As a result of this discovery, a Reportability Determination was performed on July 3, 2006. The Reportability Determination concluded that the MSIV was inoperable from receipt of the control room alarm until the failed valve control module was replaced, a duration of approximately 20 hours. The plant operated at full power during this time with the MSIV open. TS 3.7.1.5, Main Steam Isolation Valves allow only four hours to restore a MSIV to operable status before requiring a plant shutdown. The MSIVs are also containment isolation valves (CIV). TS 3.6.3, Containment Isolation Valves allow only 4 hours to restore a CIV to operable before requiring either the CIV be closed or the plant shutdown. Consequently, this event resulted in a condition prohibited by the TS. The condition did not involve a safety system functional failure.

II. Cause of Event

The cause of this event was a random failure of a MSIV control module printed circuit board. This is the first confirmed valve control module failure at Seabrook Station. The system is qualified for a 40-year life.

III. Analysis of Event

One MSIV is provided on each steam generator to provide positive shutoff of steam flow during emergency as well as normal operation. Each MSIV receives closure signals from both Train A and Train B instruments and logic circuits. The MSIVs are located in two separate pipe chases, two MSIVs in each pipe chase. Open, close and partial stroke test signals to each MSIV are processed through the MSIV logic cabinets. There are four MSIV control cabinets. Each cabinet processes either the Train A or Train B signals to the MSIVs. The alarm received in the Main Control Room was indicative of a problem with the cabinet that processes the Train A signal for two MSIVs (MS-V88 and MS-V90). Troubleshooting into the cause for the alarm ultimately determined that the alarm was due to a faulty valve control module for MS-V-88 and that the nature of the fault rendered MS-V-88 inoperable. However, during the period of inoperability, MS-V-88 remained capable of closing automatically via Train B closure signals and circuitry.

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

This was a random failure of a printed circuit board in the Train A MSIV logic cabinet. Review of the failure history of MSIV logic failures indicates relatively few failures of MSIV logic boards. There are no systematic failures occurring with these boards. Based on the random nature of this failure there is no transportability to other printed circuit boards in the MSIV logic cabinets.

The event had no adverse impact on the plant or on the health and safety of the public or plant personnel. No plant transients, systems actuations, or consequences resulted from the event. No other inoperable structures, systems, or components contributed to this event.

This event is of regulatory significance because it met the reporting criterion of 10CFR50.73(a)(2)(i)(B) for a condition prohibited by the TS. The event was reported to the NRC on July 3, 2006 at 1623 (event #42684) in accordance with the Seabrook Station operating license condition 2.G for a violation of the TS.

IV. Corrective Action

The failed MSIV valve control module printed circuit board was replaced.

V. Similar Events

This is the first confirmed valve control module failure at Seabrook Station.

VI. Manufacturer Data

The valve control module was originally manufactured by Consolidated Control P/N 6N372-1.