PSEG Nuclear LLC
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PSEG
Nuclear LLC

10CFR50.73

LR-N15-0075

MAR 2 5 2015

United States Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555-001

Hope Creek Generating Station Unit 1
Renewed Facility Operating License No. NPF-57
Docket No. 50-354

Subject: Licensee Event Report 2013-011-00

In accordance with the requirements of 10 CFR 50.73(a)(2)(i)(B), and 10 CFR 50.73(a)(2)(v)(C), PSEG Nuclear LLC is submitting the enclosed Licensee Event Report (LER) Number 2013-011-00, "Filtration, Recirculation and Ventilation Fan Exceeded Technical Specification Allowed Outage Time."

If you have any questions or require additional information, please contact Mr. Tom MacEwen at (856) 339-1097.

There are no regulatory commitments contained in this letter.

Sincerely,

Eric S. Carr
Plant Manager
Hope Creek Generating Station

ttm

Attachment: Licensee Event Report 2015-001-00

cc: Mr. Daniel Dorman, Regional Administrator – Region I, NRC

Ms. Carleen Sanders-Parker, Project Manager - US NRC

Justin Hawkins, NRC Senior Resident Inspector – Hope Creek (X24)

Mr. Patrick Mulligan, Manager IV
Bureau of Nuclear Engineering
New Jersey Department of Environmental Protection
PO Box 420
Trenton, NJ 08625

Mr. Thomas MacEwen, Hope Creek Commitment Tracking Coordinator (H02)

Mr. Lee Marabella - Corporate Commitment Tracking Coordinator (N21)

NRC FORM 366 (02-2014) U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB: NO. 3150-0104 EXPIRES: 01/31/2017

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 and Information Collections Branch (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.

LICENSEE EVENT REPORT (LER)

(See Page 2 for required number of digits/characters for each block)

1. FACILITY NAME	2. DOCKET NUMBER	3. PAGE
Hope Creek Generating Station	05000354	1 OF 3

4. TITLE Filtration, Recirculation, and Ventilation System Exceeded Technical Specification Allowed Outage Time

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
06	10	2013	2013	- 011	- 00	03	25	2015	FACILITY NAME	DOCKET NUMBER

9. OPERATING MODE	11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: *(Check all that apply)*			
1	☐ 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)
10. POWER LEVEL	☐ 20.2203(a)(2)(iii)	☐ 50.36(c)(2)	☐ 50.73(a)(2)(v)(A)	☐ 73.71(a)(4)
100	☐ 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)	X 50.73(a)(2)(i)(B)	X 50.73(a)(2)(v)(D)	Specify in Abstract below or In NRC Form 366A

12. LICENSEE CONTACT FOR THIS LER

LICENSEE CONTACT	TELEPHONE NUMER *(Include Area Code)*
Thomas MacEwen, Lead Compliance Engineer	856-339-1097

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
B	BH	FIC	W120	Y					

14. SUPPLEMENTAL REPORT EXPECTED	15. EXPECTED SUBMISSION DATE	MONTH	DAY	YEAR
☐ YES *(If yes, complete 15. EXPECTED SUBMISSION DATE)* X NO				

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

A review of plant conditions from June 2013, revealed two instances of an operation or condition that was prohibited by Technical Specifications. The reportable conditions were the result of improper operability assessment when the B Filtration, Recirculation and Ventilation System (FRVS) recirculation unit failed to start on a manual start demand on 6/24/13. As a result, two instances of Tech Spec non-compliance were identified. The first occurred on 6/10/13, and the second on 6/17/13. This was discovered during a review conducted in February 2015. In addition, routine Emergency Diesel Generator (EDG) activities created a condition that could have prevented the fulfillment of a safety function due to the failure to recognize the B FRVS recirculation unit inoperability.

The conditions were determined to be reportable per 10 CFR 50.73(a)(2)(i)(B) as any operation or condition prohibited by Technical Specifications and per 10 CFR 50.73(a)(2)(v)(D) as an event or condition that could have prevented fulfillment of a safety function to mitigate the consequences of an accident.

1. FACILITY NAME	2. DOCKET	6. LER NUMBER			3. PAGE
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Hope Creek Generating Station	05000354	2013	- 011	- 00	2 OF 3

NARRATIVE

PLANT AND SYSTEM IDENTIFICATION
General Electric – Boiling Water Reactor (BWR/4)
Filtration, Recirculation and Ventilation System {BH/FIC}*
*Energy Industry Identification System {EIIS} codes and component function identifier codes appear as {SS/CCC}

IDENTIFICATION OF OCCURRENCE
Event Date: 6/10/13
Discovery Date: 2/13/15

CONDITIONS PRIOR TO OCCURRENCE
Hope Creek was in Operational Condition 1 at 100 percent rated thermal power (RTP).

DESCRIPTION OF OCCURRRENCE
On 6/24/13, at 11:34 EDT, the B Filtration, Recirculation and Ventilation System (FRVS) recirculation unit was declared inoperable when the associated fan tripped on low flow following a manual start signal. The system was being placed in service for scheduled surveillance testing. Maintenance technicians subsequently identified and repaired a loose electrical connection in the fan flow controller. The B FRVS recirculation unit was restored to an OPERABLE condition on 6/24/13, at 16:30. The flow controller is a Westinghouse Veritrak Model 751C.

The B FRVS recirculation unit surveillance test was completed satisfactorily on 6/2/13. Maintenance was performed on the fan flow controller on 6/3/13 to repair a faulty indication. Following the repair, a post maintenance test (PMT) was performed to verify electrical connectivity of the flow control circuit. However, the fan was not placed in service as part of the PMT to verify unit operation. The fan was not operated again until 6/24/13, when it tripped upon a manual start.

Plant Technical Specifications require that with one or two FRVS recirculation units inoperable, the units shall be returned to OPERABLE within 7 days, or the plant shall be in HOT SHUTDOWN within 12 hours and COLD SHUTDOWN within the following 24 hours. Contrary to this requirement, the FRVS recirculation unit was inoperable from 6/3/13 at 15:38, until 6/24/13 at 16:30, a period of 21 days, 52 minutes. During this period, the plant was shut down for an unplanned outage and was in Operational Condition 4, COLD SHUTDOWN, from 6/13/13 at 16:00, until 6/17/13 at 10:02, when a plant startup was commenced. During this time the LCO for the B FRVS recirculation unit was not applicable.

There were two periods of Technical Specification non-compliance due to the B FRVS recirculation unit inoperability. The first was from 6/10/13 at 15:38, when the 7-day allowed outage time was exceeded. This lasted until 6/13/13 at 16:00, when the plant was placed in HOT SHUTDOWN, a period of 3 days, 22 minutes. The second non-compliance occurred on 6/17/13 at 10:02 when a mode change was made into Operational Condition 2, STARTUP, with the B FRVS recirculation unit inoperable, contrary to the requirements of Technical Specification 3.0.4. The plant operated for 7 days, 5 hours, 28 minutes, with the B FRVS recirculation unit inoperable, until 6/24/13 at 16:30, when the B FRVS recirculation fan was restored to OPERABLE.

In addition, the A Emergency Diesel Generator (EDG) was inoperable for barring on 6/18/13, from 19:41 until 19:52, a period of 11 minutes. With the A EDG inoperable, the A and E FRVS recirculation units did not have a backup emergency power supply. As a result, three FRVS recirculation units were inoperable for a period of 11 minutes. Per the Hope Creek UFSAR, a minimum of four FRVS recirculation units are required for the first 10 minutes following a design basis accident to provide cooling to the Reactor Building air, and to reduce the offsite dose.

1. FACILITY NAME	2. DOCKET	6. LER NUMBER			3. PAGE
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Hope Creek Generating Station	05000354	2013	- 011	- 00	3 OF 3

NARRATIVE

This LER is being submitted outside the 60-day reporting requirement. A recent re-evaluation of the details of the events between 6/3/13 and 6/24/13 determined that the operability of the B FRVS recirculation unit could not be assured, and therefore the condition is reportable.

CAUSE OF EVENT
The event was caused by a loose electrical pin connector that was not fully seated and locked into the connector, and was not identified by the post maintenance test performed. This pin provides the signal to operate the recirculation fan inlet damper. With the loss of this connection the damper could not operate, resulting in a low flow condition and a subsequent fan trip.

SAFETY CONSEQUENCES AND IMPLICATIONS
The FRVS recirculation system is an engineered safety feature (ESF) system, which operates during accident conditions to filter, recirculate and cool the secondary containment. There are a total of six FRVS recirculation units, of which four are required to operate following design basis accident conditions.

During the period from 6/3/13, 15:38, until 6/24/13, 16:30, there were at least four OPERABLE FRVS recirculation units, with one exception. On 6/18/13, the A EDG was inoperable for 11 minutes for barring-over. During this time, the A and E FRVS recirculation units were inoperable along with the B FRVS recirculation unit. The A EDG was available for manual starting during this period. Therefore, there was no significant impact on nuclear safety.

SAFETY SYSTEM FUNCTIONAL FAILURE
A review of this event determined that a Safety System Functional Failure (SSFF) did not occur as defined in Nuclear Energy Institute (NEI) 99-02, "Regulatory Assessment Performance Indicator Guideline."

PREVIOUS EVENTS
A review of events at Hope Creek involving the FRVS system was performed for a three year period prior to the event through 3/11/15. No similar events were identified.

CORRECTIVE ACTIONS
The FRVS fan flow controller was repaired and the system was returned to service.

Other corrective actions are documented in the licensee's corrective action program.

COMMITMENTS
This LER contains no regulatory commitments.