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PSEG
Nuclear LLC

10CFR50.73

LR-N15-0141

JUL 0 6 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 2015-003-00

In accordance with the requirements of 10 CFR 50.73(a)(2)(i)(B), PSEG Nuclear LLC is submitting the enclosed Licensee Event Report (LER) Number 2015-003-00, "Conditions Prohibited by Technical Specifications Due to Low Pressure ECCS Inoperabilities."

If you have any questions or require additional information, please contact Mr. Thomas 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 2015-003-00

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

Ms. Carleen 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

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 4

4. TITLE Conditions Prohibited by Technical Specifications Due to Low Pressure ECCS Inoperabilities

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
05	04	2015	2015	- 003	- 00	07	06	2015	FACILITY NAME	DOCKET NUMBER 05000

9. OPERATING MODE	11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: *(Check all that apply)*			
4	☐ 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)
10. POWER LEVEL	☐ 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)
0%	☐ 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

LICENSEE CONTACT	TELEPHONE NUMER *(Include Area Code)*
Thomas MacEwen, Principal Nuclear 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
-	-	-	-	-					

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

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

From May 4 through 5, 2015, during a planned Reactor Pressure Vessel (RPV) pressure test following RPV reassembly from refuel outage H1R19, Hope Creek Generating Station (HCGS) did not comply with Technical Specification Action Statement 3.5.2, action a. The plant lineup to support the RPV pressure test is classified as an Operation With the Potential to Drain the Vessel (OPDRV).

Technical Specification (TS) 3.5.2, ECCS Shutdown, requires that at least two Low Pressure ECCS subsystems be OPERABLE in Operational Condition 4. The TS requires that with only one ECCS subsystem operable, two subsystems shall be restored to operable status within four hours or suspend all OPDRVs. Contrary to this requirement, HCGS conducted the RPV pressure test OPDRV activity with only one low pressure ECCS subsystem operable. This condition existed from May 4 at 0400 until May 5 at 1042, a period of 30 hours and 42 minutes. TS compliance was restored on May 5 at 1042 when a second low pressure ECCS system was returned to OPERABLE. The cause of the event was determined to be failure to properly assess the operability status of all the ECCS subsystems which could be used to meet TS 3.5.2.

This conditions is being reported in accordance with 10 CFR 50.73(a)(2)(i)(B) as a condition prohibited by TS.

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		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
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NARRATIVE

PLANT AND SYSTEM IDENTIFICATION

General Electric — Boiling Water Reactor (BWR/4)*
Reactor Pressure Vessel (AC) — EIIS Identifier {AC/RPV}
Core Spray (BM) — EIIS Identifier {BM}
RHR/LPCI (BO) ---- EIIS Identifier {BO}
*Energy Industry Identification System {EIIS} codes and component function identifier codes appear as {SS/CCC}

IDENTIFICATION OF OCCURRENCE

Event Date: May 4, 2015
Discovery Date: May 5, 2015

CONDITIONS PRIOR TO OCCURRENCE

Hope Creek was shut down for Refueling Outage H1R19 in Operational Condition (OPCON) 4 – Cold Shutdown.

DESCRIPTION OF OCCURRENCE

From May 4 through 5, 2015, Hope Creek conducted a planned Reactor Pressure Vessel {AC/RPV} pressure test following RPV reassembly during refuel outage H1R19. The RPV pressure test is considered to be an Operation With the Potential to Drain the Vessel (OPDRV) because some isolation interlocks are bypassed during the test to preclude instrument failures that could lead to over-pressurization of the RPV.

Technical Specification (TS) 3.5.2, ECCS Shutdown, requires that at least two Low Pressure Emergency Core Cooling System (ECCS) subsystems be OPERABLE in Operational Condition 4. The TS requires that with only one ECCS subsystem operable, two subsystems shall be restored to operable status within four hours, or suspend all operations with the potential to drain the reactor vessel. Contrary to this requirement, Hope Creek conducted an OPDRV activity with only one low pressure ECCS subsystem operable.

Hope Creek has a total of six low pressure ECCS subsystems that could be used to meet the requirements of TS 3.5.2. The status of each of the subsystems at the time of the event is provided in Table 1, below. Although only one Core Spray {BM} subsystem was operable at the time, there were two additional low pressure subsystems that were available with operator action in the event that ECCS injection was required. The 'C' RHR {BO} subsystem was aligned for the Low Pressure Coolant Injection (LPCI) mode of operation with the pump breaker in the Pull-To-Lock (PTL) position. When in the PTL position, breaker closure is inhibited for automatic and manual start signals. Removing the breaker from PTL requires dispatching an operator to the breaker to reposition a single switch on the front of the breaker cubicle. The 'A' RHR subsystem was aligned for shutdown cooling, but isolated from the reactor coolant system to support the RPV pressure test. The 'A' RHR subsystem could be realigned from the control room to the LPCI mode of operation by repositioning pump suction and discharge valves.

With some Low Pressure ECCS subsystems already inoperable, 'B' and 'D' RHR Pumps were removed from service for outage-related maintenance. The collective operability status of the Low Pressure ECCS Pumps was not appropriately assessed for TS compliance. Table 1 summarizes the status of ECCS subsystems used to meet TS 3.5.2 during the period in question.

This condition existed from May 4, at 0400 until May 5 at 1042, a period of 30 hours and 42 minutes. TS compliance was restored on May 5 at 1042, when the condition was recognized and a second low pressure ECCS system was returned to operable.

Table 1 — HCGS Low Pressure ECCS status

LP ECCS subsystem	Status of system	Notes
'A' Core Spray subsystem	Inoperable; out of service for maintenance	
'B' Core Spray subsystem	Operable and in standby	
'A' RHR / LPCI subsystem	Aligned for SDC; inoperable for ECCS but available for realignment	Could be realigned for LPCI from the Control Room
'B' RHR / LPCI subsystem	Inoperable; out of service for maintenance	
'C' RHR / LPCI subsystem	Inoperable but available; pump breaker in PTL	Could be restored to operable at the pump breaker
'D' RHR / LPCI subsystem	Inoperable; out of service for maintenance	

CAUSE OF EVENT

The cause of the event was determined to be failure to properly assess the operability status of all the ECCS subsystems which could be used to meet TS 3.5.2 prior to rendering 'B' and 'D' RHR inoperable for scheduled maintenance.

SAFETY CONSEQUENCES AND IMPLICATIONS

The Emergency Core Cooling System (ECCS) network has built-in redundancy so that adequate inventory makeup can be provided, even with other failures. In Operational Condition 4, the primary purpose of the Core Spray and LPCI subsystems is to provide reactor vessel inventory makeup during postulated drain-down events. LPCI is an operating mode of the RHR system.

The 'A' RHR subsystem was aligned for shutdown cooling, but isolated from the reactor coolant system to support the RPV pressure test. The 'A' RHR subsystem could be realigned from the control room to the LPCI mode of operation by repositioning pump suction and discharge valves. In addition, the 'C' RHR subsystem was available to place in the LPCI mode of operation, if required, by removing the pump breaker from the pull-to-lock position. Improved Standard Technical Specifications (ISTS) recognized that LPCI subsystems aligned for SDC could be considered OPERABLE for ECCS provided the subsystem was otherwise OPERABLE and capable of being manually realigned. This change to the applicability of TS 3.5.2 was endorsed by the NRC approval of TSTF-416, "LPCI Valve Alignment Verification Note Location."

There were no actual consequences due to inoperability of the second required low pressure ECCS system. There is no safety significance associated with this event based on the other low pressure ECCS systems that were available for inventory makeup.

SAFETY SYSTEM FUNCTIONAL FAILURE

There were no safety system equipment problems associated with this event; therefore, there was no safety system functional failure as defined in NEI 99-02, Revision 7, Regulatory Assessment Performance Indicator Guideline.

PREVIOUS EVENTS

A review of HCGS LERs from the past three years did not reveal any similar previous events.

CORRECTIVE ACTIONS

The procedure used for operability assessment and equipment control will be revised to clarify the implementation requirements of TS 3.5.2.

Other corrective actions are being tracked in the licensee's Corrective Action Program.

COMMITMENTS

This LER contains no regulatory commitments.