

PSEG Nuclear LLC
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AUG 08 2013

10CFR50.73

LR-N13-0162

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 2013-002-00

In accordance with 10 CFR 50.73(a)(2)(iv)(A), PSEG Nuclear LLC is submitting Licensee Event Report (LER) Number 2013-002-00, "Reactor Scram due to Degrading Condenser Vacuum."

Should you have any questions concerning this letter, please contact Mr. Paul Bonnett at (856) 339-1923.

No regulatory commitments are contained in the LER.

Sincerely,

A handwritten signature in black ink, appearing to read "Eric S. Carr", with a long horizontal line extending to the right.

Eric S. Carr
Plant Manager
Hope Creek Generating Station

Attachment: Licensee Event Report 2013-002-00

cc: Mr. W. Dean, Regional Administrator – Region I
U.S. Nuclear Regulatory Commission
2100 Renaissance Blvd, Suite 100
King of Prussia, PA 19406-2713

Mr. J. Hughey, Project Manager
U.S. Nuclear Regulatory Commission
One White Flint North
Mail Stop O8 B1A
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Rockville, MD 20852

USNRC Senior Resident Inspector – Hope Creek (X24)

P. Mulligan, Manager
Bureau of Nuclear Engineering
New Jersey Department of Environmental Protection
PO Box 420
MC 33-01
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Trenton, NJ 08625

Hope Creek Commitment Tracking Coordinator (H02)

Corporate Commitment Tracking Coordinator (N21)

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 F53), 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
Reactor Scram due to Degrading Condenser Vacuum

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	12	2013	2013	- 002 -	00	08	08	2013	N/A	
									FACILITY NAME	DOCKET NUMBER
									N/A	

9. OPERATING MODE	11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR§: <i>(Check all that apply)</i>									
1	<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 checked="" type="checkbox"/> 50.73(a)(2)(iv)(A)	<input type="checkbox"/> 50.73(a)(2)(x)						
10. POWER LEVEL	<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"/> 50.73(a)(2)(x)						
100	<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)(4)						
	<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"/> 73.71(a)(5)						
	<input type="checkbox"/> 20.2203(a)(2)(vi)	<input type="checkbox"/> 50.73(a)(2)(i)(B)	<input type="checkbox"/> 50.73(a)(2)(v)(D)	<input type="checkbox"/> OTHER						
Specify in Abstract below or in NRC Form 366A										

12. LICENSEE CONTACT FOR THIS LER

FACILITY NAME Paul Bonnett, Sr. Compliance Engineer	TELEPHONE NUMBER (Include Area Code) 856-339-1923
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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
B	SG	P	I075	Y	B	SG	V	P340	Y

14. SUPPLEMENTAL REPORT EXPECTED	<input checked="" type="checkbox"/> YES <i>(If yes, complete 15. EXPECTED SUBMISSION DATE)</i>	<input type="checkbox"/> NO	15. EXPECTED SUBMISSION DATE	<u>MONTH</u> 10	<u>DAY</u> 25	<u>YEAR</u> 2013
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ABSTRACT *(Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines)*

On June 12, 2013, at 13:33, Hope Creek Unit 1 was manually scrambled from approximately 100 percent rated thermal power due to degrading main condenser vacuum. This condition occurred due to the trip of the 'B' circulating water (CW) pump with the 'B' CW discharge valve stuck open. Operators initiated a manual scram when condenser vacuum reached 6.5 inches of mercury absolute (HgA). During the scram response, the operating reactor feed pump tripped due to degrading vacuum and the operators manually placed the reactor core isolation cooling (RCIC) system in service for reactor inventory control. Operators completed the scram response procedures and placed the plant in a stabilized hot shutdown condition.

Corrective actions included repairing the 'B' CW discharge valve (DA-HV-2152B) and replacing the components most likely to have caused the 'B' CW pump trip during the forced outage.

A root cause evaluation is in progress. The results of the evaluation will be published in a supplement to this LER.

This event is reportable in accordance with 10 CFR 50.73(a)(2)(iv)(A) as a valid manual actuation of the reactor protection system and manual initiation of the RCIC system.

NRC FORM 366A
(10-2010)

LICENSEE EVENT REPORT (LER) U.S. NUCLEAR REGULATORY COMMISSION
CONTINUATION SHEET

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NARRATIVE**PLANT AND SYSTEM IDENTIFICATION**

General Electric – Boiling Water Reactor (BWR/4)
 Condenser System – Circulating Water Pump – {SG/P}* - EIS Identifier
 Condenser System – Circulating Water Discharge Valve – {SG/V}* - EIS Identifier
 Reactor Protection System – {JC/NA}* - EIS Identifier

*Energy Industry Identification System {EIS} codes and component function identifier codes appear as {SS/CCC}

IDENTIFICATION OF EVENT

Event Date: June 12, 2013
 Discovery Date: June 12, 2013

CONDITIONS PRIOR TO EVENT

Hope Creek was in Operational Condition 1 at 100 percent rated thermal power (RTP). The 'C' service water system was inoperable for planned maintenance and the reactor core isolation cooling (RCIC) system was in service for quarterly inservice testing. The status of these two systems did not contribute to the event. The plant was operating with the 'B' circulating water discharge valve (DA-HV-2152B) stuck open. This condition did contribute to this event.

DESCRIPTION OF EVENT

On June 12, 2013, at 13:32 EDT, the 'B' circulating water (CW) pump {SG/P} tripped with the 'B' CW discharge valve {SG/V} stuck open resulting in a degrading vacuum. In accordance with plant procedures, the operators lowered reactor power from 100% in an effort to stabilize condenser vacuum. When vacuum reached 6.5 inches of mercury absolute (HgA), the operators initiated a manual reactor scram {JC/NA} at 13:33, in accordance with plant procedures. All control rods inserted as required and all systems functioned as expected following the scram. The 'A' reactor feed pump turbine (RFPT) was in service for reactor pressure vessel (RPV) inventory control. No automatic emergency core cooling system (ECCS) or reactor core injection cooling (RCIC) system initiations occurred. No primary or secondary containment isolations occurred. At the time of the event, a RCIC quarterly inservice test was in progress, but did not contribute to the event. Operators secured the RCIC pump and restored it to a standby lineup. At approximately 14:00, the main condenser vacuum further degraded due to two redundant sealing steam supply valves failing to reposition as designed causing the RFPT to trip. The RFPT could not be recovered and as a result, the operators manually placed RCIC in service for RPV inventory control. At 14:50, operators secured RCIC and controlled reactor level with the secondary condensate pumps. Operators completed the scram response procedures and placed the plant in a stabilized hot shutdown condition.

At 16:59 EDT, on June 12, 2013, Hope Creek made a 4-hour notification to the NRC under 10 CFR 50.72(b)(2)(iv)(B) for an actuation of the reactor protection system (RPS), and an 8-hour notification under 10 CFR 50.72(b)(3)(iv)(A) for a valid manual initiation of the RCIC system (Event Number 49108).

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NARRATIVE

This event is reportable in accordance with 10 CFR 50.73(a)(2)(iv)(A) as a valid manual actuation of RPS and manual initiation of the RCIC system.

Additional Background

On May 7, 2013, the 'B' CW discharge valve (DA-HV-2152B) failed to stroke from OPEN- FULL to OPEN-MID while attempting to remove the 'B' CW pump from service for maintenance. The CW discharge valves are model Triton XR-70, 84 inch, butterfly valves manufactured by PRATT. The valves are operated hydraulically by a hydraulic power unit. Initial troubleshooting revealed the valve was unable to be stroked closed. An Operational and Technical Decision Making (OTDM) document determined the acceptability of continued operation with the degraded discharge valve until it could be repaired in the fall refueling outage. The evaluation acknowledged the risk of a reactor scram on low condenser vacuum, especially during the summer months, however it concluded there would be no adverse impact to plant components or nuclear safety.

CAUSE OF EVENT

A root cause evaluation is in progress. The results of the evaluation will be published in a supplement to this LER.

SAFETY CONSEQUENCES AND IMPLICATIONS

There were no nuclear safety consequences associated with this event. All control rods fully inserted following the initiation of the manual reactor scram. There were no automatic initiations of safety systems, and immediate actions performed by the operators were adequate and appropriate in placing and maintaining the reactor in a safe shutdown condition. The loss of condenser vacuum classified the event as an unplanned scram with complications in accordance with NEI 99-02; however, it is concluded that the safety significance of this event was low and the event did not pose a threat to the health and safety of the public or plant personnel.

SAFETY SYSTEM FUNCTIONAL FAILURE

A review of this event determined that a Safety System Functional Failure (SSFF) as defined in NEI 99-02, "Regulatory Assessment Performance Indicator Guidelines," did not occur. This event did not prevent the ability of a system to fulfill its safety function to either shutdown the reactor, remove residual heat, control the release of radioactive material, or mitigate the consequences of an accident.

PREVIOUS EVENTS

A root cause evaluation is in progress. Previous events will be determined after the root cause evaluation is complete.

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NARRATIVE

CORRECTIVE ACTIONS

1. The 'B' circulating water discharge valve (DA-HV-2152B) was repaired during the forced outage.
2. The components most likely to have caused the 'B' circulating water pump trip were replaced.
3. A root cause evaluation is in progress. Corrective actions will be published in a supplement to this LER.

COMMITMENTS

This LER contains no regulatory commitments.