



Entergy Nuclear Operations, Inc.
Pilgrim Nuclear Power Station
600 Rocky Hill Road
Plymouth, MA 02360

November 13, 2017

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

SUBJECT: Licensee Event Report 2017-003-01, Supplement to Suppression Pool Declared Inoperable Due to High Water Level

Pilgrim Nuclear Power Station
Docket No. 50-293
Renewed License No. DPR-35

LETTER NUMBER: 2.17.062

Dear Sir or Madam:

The enclosed Licensee Event Report (LER) 2017-003-01, Supplement to Suppression Pool Declared Inoperable Due to High Water Level, is submitted in accordance with Title 10 Code of Federal Regulations 50.73. Revisions to the previously submitted LER are annotated by a vertical bar to the right of the wording changes.

If you have any questions or require additional information, please contact me at (508) 830-8323.

There are no regulatory commitments contained in this letter.

Sincerely,

A handwritten signature in black ink, appearing to read "Everett P. Perkins, Jr." with a stylized flourish at the end.

Everett P. Perkins, Jr.
Manager, Regulatory Assurance

EPP/sc

Attachment: Licensee Event Report 2017-003-01, Supplement to Suppression Pool Declared Inoperable Due to High Water Level (3 Pages)

JEZZ
NRR

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

Mr. John Lamb, Senior Project Manager
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Mail Stop O-8C2A
Washington, DC 20555

NRC Senior Resident Inspector
Pilgrim Nuclear Power Station

Attachment

Letter Number 2.17.062

Licensee Event Report 2017-003-01

Supplement to Suppression Pool Declared Inoperable Due to High Water Level

(3 Pages)



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 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.

1. FACILITY NAME Pilgrim Nuclear Power Station	2. DOCKET NUMBER 05000293	3. PAGE 1 OF 3
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4. TITLE
Supplement to Suppression Pool Declared Inoperable Due to High Water Level

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
03	31	2017	2017	003	01	11	13	2017	N/A	N/A
									FACILITY NAME	DOCKET NUMBER
									N/A	N/A

9. OPERATING MODE		11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check all that apply)							
N	<input type="checkbox"/>	20.2201(b)	<input type="checkbox"/>	20.2203(a)(3)(i)	<input type="checkbox"/>	50.73(a)(2)(ii)(A)	<input type="checkbox"/>	50.73(a)(2)(viii)(A)	
	<input type="checkbox"/>	20.2201(d)	<input type="checkbox"/>	20.2203(a)(3)(ii)	<input type="checkbox"/>	50.73(a)(2)(ii)(B)	<input type="checkbox"/>	50.73(a)(2)(viii)(B)	
	<input type="checkbox"/>	20.2203(a)(1)	<input type="checkbox"/>	20.2203(a)(4)	<input type="checkbox"/>	50.73(a)(2)(iii)	<input type="checkbox"/>	50.73(a)(2)(ix)(A)	
	<input type="checkbox"/>	20.2203(a)(2)(i)	<input type="checkbox"/>	50.36(c)(1)(i)(A)	<input 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)(ii)	<input type="checkbox"/>	50.36(c)(1)(ii)(A)	<input type="checkbox"/>	50.73(a)(2)(v)(A)	<input type="checkbox"/>	73.71(a)(4)
97	<input type="checkbox"/>	20.2203(a)(2)(iii)	<input type="checkbox"/>	50.36(c)(2)	<input type="checkbox"/>	50.73(a)(2)(v)(B)	<input type="checkbox"/>	73.71(a)(5)	
	<input type="checkbox"/>	20.2203(a)(2)(iv)	<input type="checkbox"/>	50.46(a)(3)(ii)	<input type="checkbox"/>	50.73(a)(2)(v)(C)	<input type="checkbox"/>	73.77(a)(1)	
	<input type="checkbox"/>	20.2203(a)(2)(v)	<input type="checkbox"/>	50.73(a)(2)(i)(A)	<input checked="" type="checkbox"/>	50.73(a)(2)(v)(D)	<input type="checkbox"/>	73.77(a)(2)(i)	
	<input type="checkbox"/>	20.2203(a)(2)(vi)	<input type="checkbox"/>	50.73(a)(2)(i)(B)	<input type="checkbox"/>	50.73(a)(2)(vii)	<input type="checkbox"/>	73.71(a)(2)(ii)	
			<input type="checkbox"/>	50.73(a)(2)(i)(C)	<input type="checkbox"/> OTHER		Specify in Abstract below or in NRC Form 366A		

12. LICENSEE CONTACT FOR THIS LER

LICENSEE CONTACT Mr. Everett P. Perkins, Jr. - Regulatory Assurance Manager	TELEPHONE NUMBER (Include Area Code) 508-830-8323
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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
				N					

14. SUPPLEMENTAL REPORT EXPECTED				15. EXPECTED SUBMISSION DATE		
<input type="checkbox"/> YES (If yes, complete 15. EXPECTED SUBMISSION DATE)				<input checked="" type="checkbox"/> NO		
				MONTH	DAY	YEAR


ABSTRACT
On March 31, 2017, at 1155 [EDT], with the reactor at 97 percent core thermal power and steady state conditions, operators were restoring a valve lineup after performing planned operations when a pathway was created through valve manipulation that allowed water in the Condensate Storage Tank to be diverted to the suppression pool. The rise in suppression pool water level exceeded the maximum water level specified in Technical Specifications (TS) and caused a lowering of the drywell to suppression pool differential pressure.

With suppression pool water level and differential pressure both outside of TS limits, Limiting Condition for Operation Action Statements 3.7.A.5 and 3.7.A.8.c were both entered and investigation into the cause of diverting water into the suppression pool was initiated. Water level was restored to within TS limits at 1540 [EDT].

An 8-hour non-emergency notification was made in accordance with 10 CFR 50.72(b)(3)(v)(D), any event or condition that at the time discovery had the potential to have prevented the fulfillment of the safety function of structures or systems that are needed to mitigate the consequences of an accident.

The initial LER was submitted under 10 CFR 50.73(a)(2)(i)(B), operation or condition prohibited by TS, but it was subsequently determined it should have been submitted under 10 CFR 50.73(a)(2)(v)(D), any event or condition that at the time of discovery had the potential to have prevented the fulfillment of the safety function of structures or systems that are needed to mitigate the consequences of an accident, to more precisely describe this condition.

There was no impact to public health and safety from this condition.

NRC FORM 366 (04-2017)	U.S. NUCLEAR REGULATORY COMMISSION	APPROVED BY OMB: NO. 3150-0104	EXPIRES: 03/31/2020	
		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.		
		1. FACILITY NAME	2. DOCKET NUMBER	3. LER NUMBER
Pilgrim Nuclear Power Station	05000-293	YEAR	SEQUENTIAL NUMBER	REV NO.
		2017	003	01

NARRATIVE

BACKGROUND

The suppression pool water provides the heat sink for the reactor primary system energy release following a postulated rupture of the system. The suppression pool water volume must absorb the associated decay and structural sensible heat released during primary system blow-down. The design volume of the suppression pool (water and air) was obtained by considering that the total volume of reactor coolant to be condensed is discharged to the suppression pool and that the drywell volume is purged to the suppression pool.

The suppression pool is designed to absorb the sudden input of heat from the primary system. In the long term, the pool continues to absorb residual heat generated by fuel in the reactor core.

EVENT DESCRIPTION

On March 31, 2017, at 1155 [EDT], with the reactor at 97 percent core thermal power and steady state conditions, operators were restoring a valve lineup after performing planned operations when a pathway was created through valve manipulation that allowed water in the Condensate Storage Tank to be diverted to the suppression pool. The rise in suppression pool water level to (+) 6.3 inches exceeded the maximum suppression pool water level specified in Technical Specification (TS) and the TS limit for differential pressure was lowered to less than 1.17psid between the drywell and suppression pool.


With suppression pool water level and differential pressure outside of TS limits, both Limiting Condition for Operation Action Statement (LCOAS) 3.7.A.5 and 3.7.A.8.c were entered. In addition, Emergency Operating Procedures-03, Primary Containment Control, was also entered due to high suppression pool water level. Investigation into the cause of diverting water to the suppression pool was initiated. Appropriate procedural guidance was followed to begin lowering suppression pool water level below the limit specified in the TS. With suppression pool water level and differential pressure both returned to within TS limits, LCOAS 3.7.A.8.c and 3.7.A.5 were both exited at 1515 and 1540 respectively.

The direct cause of the condition was that the control room operator opened the Core Spray Pump A Suppression Pool Suction Valve prior to verifying closed the Core Spray Pump Suction Valve from the Condensate Storage Tank and the Condensate Supply to Core Spray System Valve.

CORRECTIVE ACTIONS

Upon discovery of the suppression pool high water level condition, Operations returned the suppression pool water level to the required level using appropriate procedural guidance.

The Control Room Supervisor and the Reactor Operator were disqualified.

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		<small>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.</small>	

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		2017	003	01

NARRATIVE

SAFETY CONSEQUENCES

The safety function of the suppression pool system was not adversely affected due to the high water level condition in the suppression pool. A preliminary assessment has demonstrated that the suppression pool water level was within a volume range that will accommodate all normal, transient, emergency, and accident events within the design capabilities of the primary containment system. As such, there are no consequences to general safety of the public, nuclear safety, industrial safety and radiological safety from this condition.

Maintaining a drywell to suppression pool pressure differential to keep the downcomer legs clear of water significantly reduces suppression pool post LOCA hydrodynamic loads. A pressure of 1.17psid is required to sufficiently clear the water legs of the downcomers without bubbling nitrogen into the suppression pool at the 3.00 ft. downcomer submergence level.

The suppression pool remained available and functional and capable of performing its intended safety function during the event. As such, there was no actual loss of safety function.

The engineering evaluation that was performed concluded that this event did not constitute a Safety System Functional Failure. (Reference NEI 99-02, Revision 7, Regulatory Assessment Performance Indicator Guideline, Section 2.2, Mitigating Systems Cornerstone, Safety System Functional Failures, Clarifying Notes, Engineering Analyses.) As such, this event will not be reported in the NRC Performance Indicator for Safety System Functional Failures since an engineering evaluation was performed which determined that the system was capable of performing its safety function during this event.

REPORTABILITY

This event was initially reported under 10 CFR 50.73(a)(2)(i)(B), as a condition that was prohibited by TS. Subsequent to submission of the initial Licensee Event Report, based on NRC questions, it was concluded that this notification should have more precisely been made in accordance with 10 CFR 50.73(a)(2)(v)(D), event or condition that could have potentially prevented fulfillment of a safety function of structures or systems that are needed to mitigate the consequences of an accident.

PREVIOUS EVENTS

A review of PNPS Licensee Event Reports for the past five years did not identify any similar occurrences of declaring the suppression pool inoperable due to a high water level condition.

REFERENCE

CR-PNP-2017-02785