



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

March 15, 2017

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

SUBJECT: Licensee Event Report 2017-001-00, Reactor Building Isolation Dampers Failed to Isolate

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

LETTER NUMBER: 2.17.022

Dear Sir or Madam:

The enclosed Licensee Event Report 2017-001-00, Reactor Building Isolation Dampers Failed to Isolate, is submitted in accordance with Title 10 Code of Federal Regulations 50.73.

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 "E. Perkins, Jr." followed by a flourish.

Everett P. Perkins, Jr.  
Manager, Regulatory Assurance

EPP/sc

Attachment: Licensee Event Report 2017-001-00, Reactor Building Isolation Dampers Failed to Isolate (4 Pages)

IEZZ  
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

Ms. Booma Venkataraman, 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 2.17.022

Licensee Event Report 2017-001-00

Reactor Building Isolation Dampers Failed to Isolate

(4 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.

<b>1. FACILITY NAME</b> Pilgrim Nuclear Power Station	<b>2. DOCKET NUMBER</b> 05000293	<b>3. PAGE</b> 1 OF 4
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**4. TITLE**  
Reactor Building Isolation Dampers Failed to Isolate

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
01	16	2017	2017	001	00	03	15	2017	N/A	N/A

**9. OPERATING MODE** N

**11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check all that apply)**

<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)
<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)
<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 checked="" 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
D	NG	CDMP	P014	Y					

**14. SUPPLEMENTAL REPORT EXPECTED**  YES (If yes, complete 15. EXPECTED SUBMISSION DATE)  NO

**15. EXPECTED SUBMISSION DATE**

MONTH	DAY	YEAR

**ABSTRACT**


On January 16, 2017, with the reactor at 100 percent power and the mode switch in RUN, Pilgrim Nuclear Power Station (PNPS) was performing surveillance testing of secondary containment isolation dampers when dampers AO-N-82 and AO-N-83, refueling floor supply isolation dampers, failed to fully close when the control switches were taken to close.

The failure of dampers AO-N-82 and AO-N-83 to fully close resulted in a loss of safety function for secondary containment, causing immediate entry into Limiting Condition for Operation (LCO) Action Statement (AS) 3.7.C.2.a, at 1155 hours. This LCO AS was exited at 1206 hours when the dampers were verified closed.

An 8-hour non-emergency notification was made in accordance with 10 CFR 50.72(b)(3)(v), any event or condition that at the time discovery could have prevented the fulfillment of the safety function of structures or systems that are needed to: (C) Control the release of radioactive material; or (D) Mitigate the consequences of an accident.

The reactor building isolation dampers were cleaned, lubricated and post-work tested. PNPS has returned the dampers to operable status. Planned action to prevent recurrence is to revise the preventive maintenance strategy.

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

<b>NRC FORM 366</b> (06-2016)		<b>U.S. NUCLEAR REGULATORY COMMISSION</b>		<b>APPROVED BY OMB: NO. 3150-0104</b>		<b>EXPIRES: 10/31/2018</b>	
 <b>LICENSEE EVENT REPORT (LER) CONTINUATION SHEET</b>		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 <a href="mailto:Infocollects.Resource@nrc.gov">Infocollects.Resource@nrc.gov</a> , 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.					
		<b>1. FACILITY NAME</b>		<b>2. DOCKET NUMBER</b>		<b>3. LER NUMBER</b>	
Pilgrim Nuclear Power Station		05000293		YEAR	SEQUENTIAL NUMBER	REV NO.	
				2017	001	00	

**NARRATIVE**
**BACKGROUND**

The Reactor Building Isolation and Control System (RBICS) safety objective is to limit the release to the environment of radioactive material so that offsite doses from a postulated design basis accident will be below the guideline values stated in 10 CFR 100. The RBICS shall trip the Reactor Building supply and exhaust fans, isolate the normal ventilation system, and provide the initiation signals for the Standby Gas Treatment System in the event of a postulated Loss Of Coolant Accident (LOCA) in the drywell or a postulated fuel handling accident in the Reactor Building.

The Reactor Building Heating, Ventilation and Air Conditioning (HVAC) System includes the RBIS subsystem, which supports the secondary containment function by automatically closing HVAC-related openings in secondary containment in the event of high drywell pressure, low reactor pressure vessel water level, or high airborne radiation levels in the refuel floor area, and Equipment Area Cooling System components, which supply supplemental cooling to the Core Standby Cooling Systems spaces within the reactor building and reject heat to the Reactor Building Closed Cooling Water System.

Pilgrim Nuclear Power Station (PNPS) was performing surveillance testing for the secondary containment isolation supply dampers. During the performance of this test the refuel floor supply isolation dampers showed dual indication when the control switches were taken to close. This is indicative of a failure to close.

**EVENT DESCRIPTION**

On January 16, 2017, with the reactor at 100 percent power and the mode switch in RUN, PNPS was performing surveillance testing of secondary containment isolation dampers when dampers AO-N-82 and AO-N-83, refueling floor supply isolation dampers, failed to fully close on demand as revealed by dual indication in the Control Room.

An 8-hour non-emergency notification was made in accordance with 10 CFR 50.72(b)(3)(v), Any event or condition that at the time discovery could have prevented the fulfillment of the safety function of structures or systems that are needed to: (C) Control the release of radioactive material; or (D) Mitigate the consequences of an accident.

The dampers were manually closed. The reactor building isolation dampers were then cleaned and lubricated. The dampers were then cycled five times with satisfactory closure time results. PNPS has returned the dampers to operable status.

NRC FORM 366  
(06-2016)

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB: NO. 3150-0104

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Pilgrim Nuclear Power Station	05000293	2017	001	00

### NARRATIVE

#### CAUSE OF THE EVENT

The root cause of this event is that the preventative maintenance strategy was inadequate for secondary containment isolation supply dampers AO-N-82 and AO-N-83 and was not sufficiently structured to prevent repetitive failures of high critical components. This caused the condition, since preventative maintenance actions (which are intended to prevent repetitive failures of high critical components) were not adequate to properly maintain these components, resulting in a loss of safety function for secondary containment.

#### CORRECTIVE ACTIONS

The immediate corrective action was for the reactor building isolation dampers to be cleaned and lubricated and post-work tested and the dampers were then cycled five times with satisfactory closure time results. PNPS used compensatory measures to restore the dampers to operable status.

The Corrective Action to Prevent Recurrence addresses revising the preventative maintenance strategy for secondary containment supply and exhaust isolation dampers as follows: Refurbish damper actuators in accordance with vendor recommendations; Perform annual inspection and maintenance of secondary containment dampers; and bench test and record torque values to verify the adequacy of the actuators prior to installation and after they have been removed and replaced.

#### SAFETY CONSEQUENCES

There were no consequences to the safety of the general public, nuclear safety, industrial safety, and radiological safety due to this event. The actual consequences were a loss of safety function for secondary containment and entry into Limiting Condition for Operation Action Statement 3.7.C.2.a. Per the guidance in NUREG-1022, Section 5.2.2 the event date is the date of discovery, January 16, 2017, since there is no firm evidence, based on a review of relevant information that the issue existed previously. The Limiting Condition for Operation Action Statement was entered at 1155 hours on January 16, 2017 and exited at 1206 hours on the same day. As such, the loss of safety function for secondary containment existed for a total duration of 11 minutes.

There was no adverse impact on the public health or safety.

NRC FORM 366  
(06-2016)

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Pilgrim Nuclear Power Station	05000293	2017	001	00

### NARRATIVE

#### REPORTABILITY

This event is reportable under 10 CFR 50.73(a)(2)(v)(C) and 10 CFR 50.73(a)(2)(v)(D), event or condition that could have prevented fulfillment of a safety function of structures or systems that are needed to: (C) Control the release of radioactive material; or (D) Mitigate the consequences of an accident.

#### PREVIOUS EVENTS

A review of PNPS Licensee Event Reports for the past five years did not identify any loss of safety function due to isolation dampers failing to isolate.

#### ENERGY INDUSTRY IDENTIFICATION SYSTEM (EIIS) CODES

The EIIS codes for Components and Systems referenced in this report are as follows:

#### SYSTEMS

Reactor Building Isolation Dampers - NG

#### COMPONENTS

Control Damper - CDMP

#### REFERENCE

CR-PNP-2017-00494