



Entergy Nuclear Operations, Inc.
Palisades Nuclear Plant
27780 Blue Star Memorial Highway
Covert, MI 49043
Tel 269 764 2000

Jeffery A. Hardy
Director, Regulatory Assurance and
Performance Improvement

PNP 2016-027

May 23, 2016

10 CFR 50.73

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

SUBJECT: Both Control Room Ventilation Filtration Trains Declared Inoperable

Palisades Nuclear Plant
Docket 50-255
License No. DPR-20

Dear Sir or Madam:

The enclosed Licensee Event Report (LER) 2016-002-00, "Both Control Room Ventilation Filtration Trains Declared Inoperable," is submitted in accordance with 10 CFR 50.73(a)(2)(v)(D).

This letter contains no new commitments and no revisions to existing commitments.

Sincerely,

A handwritten signature in black ink, appearing to be "JAH" followed by a stylized flourish.

JAH/tad

Attachment: 2016-002-00, Both Control Room Ventilation Filtration Trains Declared Inoperable

CC Administrator, Region III, USNRC
Project Manager, Palisades, USNRC
Resident Inspector, Palisades, USNRC

ATTACHMENT

LER 2016-002-00

**BOTH CONTROL ROOM VENTILATION FILTRATION
TRAINS DECLARED INOPERABLE**

3 Pages Follow



LICENSEE EVENT REPORT (LER)

(See Page 2 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 FOIA, Privacy and Information Collections Branch (T-5 F53), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to Infocollections.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 PALISADES NUCLEAR PLANT	2. DOCKET NUMBER 05000255	3. PAGE 1 OF 3
--	-------------------------------------	--------------------------

4. TITLE Both Control Room Ventilation Filtration Trains Declared Inoperable

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	24	2016	2016	- 002	- 00	05	23	2016	FACILITY NAME	DOCKET NUMBER 050000
									FACILITY NAME	DOCKET NUMBER 050000

9. OPERATING MODE	11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check all that apply)			
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)
10. POWER LEVEL 100	<input type="checkbox"/> 20.2203(a)(2)(ii)	<input type="checkbox"/> 50.36(c)(1)(ii)(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)(iii)	<input type="checkbox"/> 50.36(c)(2)	<input type="checkbox"/> 50.73(a)(2)(v)(A)	<input type="checkbox"/> 73.71(a)(4)
	<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)(5)
	<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"/> OTHER
	<input type="checkbox"/> 20.2203(a)(2)(vi)	<input type="checkbox"/> 50.73(a)(2)(i)(B)	<input checked="" type="checkbox"/> 50.73(a)(2)(v)(D)	Specify in Abstract below or in NRC Form 366A

12. LICENSEE CONTACT FOR THIS LER

LICENSEE CONTACT Barb Dotson, Regulatory Assurance Manager	TELEPHONE NUMBER (Include Area Code) 269-764-2265
--	---

13. COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX
A	VI	AHU	A220	Y					

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

MONTH	DAY	YEAR

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

At 0211 hours on March 24, 2016, both control room ventilation filtration system trains were declared inoperable in accordance with Technical Specification (TS) 3.7.10, Condition B, due to the inability to fully close control room envelope (CRE) boundary door-15. Mitigating actions were implemented that ensured CRE occupant radiological exposures would not exceed limits and CRE occupants would be protected from chemical and smoke hazards. After maintenance was performed, door-15 was fully closed and both control room ventilation filtration system trains were declared operable for this condition at 1828 hours on March 24, 2016.

Inadvertent operation of the normal opening/closing handwheel of door-15 to the closed position, prior to the door being fully closed, caused the door's locking bolts to extend out from inside the door body to the locked closed position. This created interference between the door and the door frame that prevented the door from being closed. An interlock prevents the door's locking bolts from moving, using the normal opening/closing handwheel, when the locking bolts are extended and the door is open. Due to the lack of detail in the operating instructions posted on the door, and the personnel being unaware of the interlock, they continued to try and manipulate the locking bolts via the handwheel. Continued operation of the handwheel, with the interlock activated, potentially caused a failure of a bushing inside the door's operating mechanism. The failed bushing prevented normal and emergency operation of the door's locking bolts.

The failed bushing inside the door's operating mechanism was replaced. Additional corrective actions include sharing lessons learned from this event, adding adequate detail to the operating instructions posted on the door, and modification to the door's preventative maintenance program to include bushing inspection and, if needed, replacement.

**LICENSEE EVENT REPORT (LER)
CONTINUATION SHEET**

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	3. LER NUMBER		
PALISADES NUCLEAR PLANT	05000255	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER
		2016	- 002	- 00

NARRATIVE**SYSTEM DESIGN/FUNCTION**

The control room ventilation [AHU] filtration system [VI] safety function is to limit radiation exposure of control room personnel during any of the postulated design basis events within the guidelines of 10 CFR 50, Appendix A and General Design Criterion 19. Specifically, control room ventilation filtration is designed to maintain a habitable environment in the control room for 30 days of occupancy after a design basis accident without exceeding a five rem total effective dose equivalent. Technical Specification (TS) 3.7.10 allows control room envelope (CRE) boundary doors to be opened intermittently, under administrative control for preplanned activities, provided the doors can be rapidly restored to the design condition.

EVENT DESCRIPTION

At 0211 hours on March 24, 2016, both control room ventilation filtration system trains were declared inoperable in accordance with TS 3.7.10, Condition B, due to the inability to fully close CRE boundary door-15. Mitigating actions were implemented that ensured CRE occupant radiological exposures would not exceed limits and CRE occupants would be protected from chemical and smoke hazards. After maintenance was performed, door-15 was fully closed and both control room ventilation filtration system trains were declared operable for this condition at 1828 hours on March 24, 2016.

At the time of the event, both trains of the control room ventilation filtration were inoperable for preplanned maintenance associated with a modification to a CRE wall. No additional structures, components, or systems were inoperable and contributed to the event at the time of discovery.

The event was initially reported to the NRC in accordance with 10 CFR 50.72(b)(3)(v)(D) as documented in event report #51820. This LER is submitted based on NUREG 1022 revision 3, section 3.2.7 guidance which identifies that the requirements of 10 CFR 50.73(a)(2)(v)(D) apply when a system that is used to mitigate the consequences of an accident was declared TS inoperable and no redundant system or equipment could be declared operable. Based on the limited amount of air in-leakage into the CRE with door-15 only slightly open, the subsequent engineering evaluation determined the control room ventilation filtration system would have maintained the ability to limit control room operator doses below required limits and no loss of safety function occurred.

CAUSE OF THE EVENT

While performing security door checks, security officers inadvertently operated the normal opening/closing handwheel of door-15 to the closed position prior to the door being fully closed. This caused the door's locking bolts to extend out from inside the door body to the locked closed position creating interference between the door and the door frame preventing the door from being fully closed. A security interlock prevents the door's locking bolts from moving, using the normal opening/closing handwheel, when the locking bolts are extended and the door is open. Due to the lack of detail in the operating instructions posted on the door, and the security officers being unaware of the interlock, they continued to try and manipulate the locking bolts via the handwheel. Continued operation of the handwheel with the interlock activated potentially caused a failure of a bushing inside the door's operating mechanism. The failed bushing prevented normal and emergency operation of the door's locking bolts.



**LICENSEE EVENT REPORT (LER)
CONTINUATION SHEET**

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	3. LER NUMBER		
PALISADES NUCLEAR PLANT	05000255	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER
		2016	- 002	- 00

NARRATIVE

ASSESSMENT OF SAFETY CONSEQUENCES

The temporary loss of ability to fully close door-15 did not challenge nuclear or radiological safety. No actual loss of safety function occurred. The control room ventilation filtration system maintained the ability to limit control room operator doses below required limits.

CORRECTIVE ACTIONS

The failed bushing inside the door's operating mechanism was replaced. Additional corrective actions include sharing lessons learned from this event, adding adequate detail to the operating instructions posted on the door, and modification to the door's preventative maintenance program to include bushing inspection and, if needed, replacement.

PREVIOUS SIMILAR EVENTS

LER 2013-003-00, Both Control Room Ventilation Filtration Trains Declared Inoperable