



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

Kevin H. Bronson
Site Vice President

May 20, 2010

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D.C. 20555

SUBJECT: Entergy Nuclear Operations, Inc.
Pilgrim Nuclear Power Station
Docket No.: 50-293
License No.: DPR-35

Licensee Event Report 2010-002-00

LETTER NUMBER: 2.10.026

Dear Sir or Madam:

The enclosed Licensee Event Report (LER) 2010-002-00, "Standby Gas Treatment Declared Inoperable After Discovery of Open Demister Door", is submitted in accordance with 10 CFR 50.73.

This letter contains no commitments.

Please do not hesitate to contact Mr. Joseph R. Lynch, (508) 830-8403, if there are any questions regarding this submittal.

Sincerely,

Kevin H. Bronson

WGL/dl

Enclosure: LER 2010-002-00, Standby Gas Treatment Declared Inoperable After Discovery of Open Demister Door", (4 pages)

cc: Mr. James S. Kim, Project Manager
Plant Licensing Branch I-1
Division of Operator Reactor
Licensing
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
One White Flint North O-8C2
11555 Rockville Pike
Rockville, MD 20852

Mr. Samuel J. Collins
Regional Administrator, Region 1
U.S. Nuclear Regulator Commission
475 Allendale Road
King of Prussia, PA 19406

INPO Records
700 Galleria Parkway
Atlanta, GA 30399-5957

Senior Resident Inspector
Pilgrim Nuclear Power Station

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NRK

LICENSEE EVENT REPORT (LER)

Estimated burden per response to comply with this mandatory information collection request: 80 hrs. 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 F52). 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 and information collection does not display a currently valid 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 05000-293	3. PAGE 1 of 4
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4. TITLE
STANDBY GAS TREATMENT DECLARED INOPERABLE AFTER DISCOVERY OF OPEN DEMISTER DOOR

5. EVENT DATE			6. LER NUMBER			7. REPORT DATE			8. OTHER FACILITIES INVOLVED	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
03	25	2010	2010	002	00	5	20	2010	N/A	05000
									FACILITY NAME	DOCKET NUMBER
									N/A	05000

9. OPERATING MODE N	11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR: (Check one or more)												
	<input type="checkbox"/> 20.2201(b)			<input type="checkbox"/> 22.2203(a)(3)(i)			<input type="checkbox"/> 50.73(a)(2)(i)(C)			<input type="checkbox"/> 50.73(a)(2)(vii)			
	<input type="checkbox"/> 22.2202(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)(vii)(B)			
	<input type="checkbox"/> 20.2203(a)(2)(i)			<input type="checkbox"/> 50.36(3)(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(3)(1)(ii)(A)			<input type="checkbox"/> 50.73(a)(2)(iv)(A)			<input type="checkbox"/> 50.73(a)(2)(x)			
10. Power Level 100	<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 checked="" type="checkbox"/> 50.73(a)(2)(v)(C)			OTHER Specify in Abstract below or in NRC Form 366A			
	<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)						

12. LICENSEE CONTACT FOR THIS LER	
NAME Joseph R. Lynch, Licensing Manager	TELEPHONE NUMBER (Include Area Code) (508) 830-8403

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	BH	DR	F030	Y						

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

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

At 22:55 EDT on March 25, 2010, the normally closed Demister Door on 'B' Train of Standby Gas Treatment (SBGT) was found open. The door was opened during the performance of a scheduled surveillance and was subsequently not closed at the completion of surveillance. With this door being open the 'B' Train of SBGT was unable to perform its safety-related function. Because of the physical configuration of the SBGT system, it could not be immediately verified whether the 'A' Train would have been able to perform its safety-related function, since it could have drawn suction through the open demister door of the 'B' Train and the normally open crosstie between the trains. Upon discovery of the condition, a 36-hour LCO was entered in accordance with the Technical Specification (TS) 3.7.B.1.a, the 'B' demister door was closed, LCO was exited, and operability of both 'A' and 'B' Trains of the SBGT System was established.

At the time the open demister door was discovered on March 25, 2010, the plant was operating at 100% power. Both Trains of SBGT System were declared inoperable from 16:07 hours to 22:55 hours, (approximately 6 hours) until the door was verified closed.

The cause of the open demister door was a human performance error due to a failure to verify that the door was closed upon completion of the surveillance.

Corrective actions taken included closing of the demister door, coaching of the affected personnel who performed the surveillance, and enhancements to the surveillance procedure to preclude recurrence.

The event posed no threat to public health and safety.

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BACKGROUND

The Pilgrim Station secondary containment system is designed, in conjunction with other engineered safeguards and nuclear safety systems, to limit the release of radioactive material during normal plant operations within the limits of 10 CFR 20 and to limit the release of radioactive material so that offsite doses from a postulated design basis accident will be below the guideline values in 10 CFR 100.

The secondary containment system consists of four subsystems: (1) the Reactor Building, (2) the Reactor Building Isolation Control System (RBICS), (3) the Standby Gas Treatment System (SGTS), and (4) the Main Stack. The Reactor Building completely encloses the primary containment system which includes the Drywell (containing the Reactor) and Torus (containing the Suppression Pool). The function of the RBICS is to trip the Reactor Building ventilation supply and exhaust fans, isolate the normal Reactor Building ventilation system, and provide initiation signals to start the SGTS in the event of a postulated Loss of Coolant Accident (LOCA) inside the Drywell or a postulated fuel handling accident in the Reactor Building. The SGTS discharges processed gases to the Main Stack via underground piping. The Main Stack provides an elevated release point for the processed gases. The mission time for the secondary containment system is 30 days.

The SGTS consists of ductwork and instrumentation and includes two full capacity, parallel air filtration assemblies that are located outside the Reactor Building. Each filter assembly includes an in-series air-operated supply damper, demister, an electrical heating coil, high efficiency particulate absorber (HEPA), two charcoal filter beds, a final HEPA filter, exhaust fan, motor-operated adjustable damper, fixed back draft damper, and an air-operated discharge damper. Cross connections between the trains and a restricting orifice are provided to maintain the required decay heat removal cooling air flow through the charcoal filter assembly in the inactive train.

Each train of SBTG contains demister doors surrounding the charcoal beds. The demister door allows access to the demister section of the SBTG Train. The demister is a section of the SBTG that removes the water droplets and drains the water to the Turbine Building sump. The demister acts as a dehumidifier to maintain the charcoal filter efficiency.

At normal reactor power operation, the SGTS Train 'A' is maintained in a standby status with the Train 'A' control switch in the AUTO position. Train 'B' is maintained in a standby status with the Train 'B' control switch in the STANDBY position. In this configuration and if an RBICS initiation signal occurs, the Train 'A' heater and fan starts, the Train 'A' supply and discharge air-operated dampers open, Train 'B' starts (fan and heater) and the Train 'B' supply and discharge air-operated dampers open. Train 'B' automatically shuts down if sufficient flow exists through Train 'A' after a preset time delay. If a failure of the Train 'A' heater or fan occurs during Train 'A' operation, Train 'B' automatically starts. If the SGTS Train 'A' is removed from standby service with the control switch in the OFF position and Train 'B' control switch in the MAINTENANCE position and an RBICS initiation signal occurs, Train 'B' starts (heater and fan) and the Train 'B' air-operated supply and discharge dampers open.

Pilgrim Station Technical Specification 3/4.7.B.1 governs the operability requirements of the SGTS. The specification requires that with certain exceptions, the SGTS shall be operable during periods that include reactor power operation (RUN, STARTUP, and HOT SHUTDOWN modes), during movement of irradiated fuel assemblies in secondary containment, during movement of new fuel over the spent fuel pool, during CORE ALTERATIONS, and during operations with a potential for draining the reactor vessel. For reactor power operation, the specification allows a 7-day limiting condition for operation (LCO) if one train is made or found to be inoperable for any reason provided the other train and associated diesel generator is operable and that if the

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system is not fully made operable within 7 days, the specification requires the initiation of a reactor shutdown and cold shutdown within the next 36 hours. If both trains are inoperable, the specification requires the initiation of a reactor shutdown with cold shutdown within 36 hours.

Licensed operators monitor drywell-torus differential pressure, and the SGTS is manually operated as necessary to maintain the differential pressure required by Technical Specifications.

EVENT DESCRIPTION

On March 25, 2010, at 12:12 hours Operations entered into a Limiting Condition of Operation (LCO) for SGBT instrument calibration and functional test for Train 'B' in accordance with Pilgrim Nuclear Power Station (PNPS) Procedure 8.M.3-18, Attachment 2. The allowed out-of-service time (AOT) in accordance with PNPS TS 3.7.B.1.c is 7 days, with one train in verified operable condition. Accordingly, the procedural steps of PNPS 8.C.34 were performed to verify the required systems were operable for the Train 'B' AOT and Train 'A' was aligned to provide the safety-related function during the surveillance. 8.M.3-18, Attachment 2 Steps 12-15 were completed and demister door on Train 'B' was opened to perform the required surveillance. At 16:07 hours Instrumentation and Control Technicians reported to the Control Room the completion of the surveillance in accordance with PNPS 8.M.3-18, Attachment 2. At 17:10 hours SGTS Train 'A' was placed in service for torus purging in accordance with PNPS Procedure 2.2.70. At 17:45 hours SGTS 'A' was secured and placed in its normal standby status.

At 22:55 hours, a demister door on Train 'B' was discovered open. The door was immediately closed upon discovery. The door was opened during performance of the scheduled surveillance and subsequently not closed at the completion of surveillance. With this door open, the 'B' Train of SGTS was inoperable. Because of the physical configuration of the SGBT system, it could not be immediately verified that the 'A' SGBT Train would be capable of performing its safety-related function. There exists a probability that 'A' SGTS Train could draw suction through the open demister door of the 'B' SGTS Train and a normally open crosstie between the Trains 'A' and 'B' without providing the required full suction flow from the secondary containment—a safety function called for under the TS 3.7.B.1. Condition Report PNP-2010-1079 was written. The LCO (LCO ACT 1-10-0063) was revised to reflect a new initiation time (12:12 hours) due to the fact that the 'B' Train SGTS demister door was open. The door was closed and the LCO was exited at 22:55 hours, and both 'A' and 'B' Trains of SGBT were declared operable.

CAUSE

The cause of this event was identified as a human performance error, failure to verify the closure of the demister door prior to completion of the surveillance in accordance with the Procedure 8.M.3-18, Attachment 2.

CORRECTIVE ACTION

Immediate corrective actions taken included: closing the demister door, coaching the affected personnel who performed the surveillance, and enhancing procedural steps to provide clarification in the surveillance procedure.

The longer term corrective action taken to preclude recurrence includes: a case study to review expectations for verification practices and implementation of standardized approach for verification practices during the performance of surveillances.

These corrective actions are tracked by the site Corrective Action Program (CAP) under CR-PNP-2010-1079

EXTENT OF PROBLEM

The SGTS surveillance that was performed is a frequently performed surveillance and the existing procedure provides steps to conduct the required surveillance. The open demister door is a unique condition due to a

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human error; it does not extend to equipment or common cause failure. Thus the extent of the problem is related to this single event. An Extent of Condition and Extent of Cause was performed as part of the Root Cause Evaluation issued for this event.

SAFETY CONSEQUENCES

The condition posed no threat to public health and safety.

The event occurred during normal power operation while at 100% power with the mode switch in the RUN position. The reactor vessel pressure was approximately 1030 psig with reactor water temperature at saturation temperature for that pressure.

During the time the demister door on Train 'B' was open, both trains were aligned to provide a suction path to maintain secondary containment integrity in the event a design basis event were to occur. However with the demister door open on Train 'B', there was a potential that the system could not have drawn the required vacuum to achieve -0.25 inches of water pressure in the secondary containment. The Train 'B' open demister door condition lasted for approximately six hours, which impacted the operability of the system to fulfill its normal safety function to draw the required vacuum on the secondary containment. During this event there were no other adverse safety conditions impacting secondary containment. Thus, the risk presented by this condition was negligible because of the very short duration of the demister door open event and that there were no other adverse conditions present at the time.

REPORTABILITY

This report was submitted in accordance with 10 CFR 50.73(a)(2)(v)(C) and (D) for an event or condition that could have prevented fulfillment of a safety function.

SIMILARITY TO PREVIOUS EVENTS

A review was conducted of Pilgrim Station LERs issued since 2001. The review focused on LERs that involved a similar event or condition involving the SGTS or similar cause. The review identified no similar event or condition.

ENERGY INDUSTRY IDENTIFICATION SYSTEM (EII) CODES

The EII codes for this report are as follows:

COMPONENTS	CODES
Demister Door	DR
SYSTEMS	
Standby Gas Treatment System (SGTS)	BH