



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

November 20, 2008

Kevin H. Bronson  
Site Vice President

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

SUBJECT: Entergy Nuclear Operations, Inc.  
Pilgrim Nuclear Power Station  
Docket No.: 50-293  
License No.: DPR-35  
  
Licensee Event Report 2008-003-00

LETTER NUMBER: 2.08.058

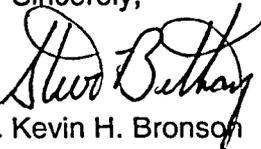
Dear Sir or Madam:

The enclosed Licensee Event Report (LER) 2008-003-00, "RCIC System Declared Inoperable During Surveillance Testing due to Procedure Error" is submitted in accordance with 10 CFR 50.73.

This letter contains no commitments.

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

Sincerely,

*for*   
Kevin H. Bronson

RMB/dml

Enclosure

cc: Mr. Samuel J. Collins  
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*JE22*  
*NRR*

**LICENSEE EVENT REPORT (LER)**

(See reverse for number of digits/characters for each block)

Estimated burden per response to comply with this mandatory information collection request: 50 hrs. Reported lessons learned are incorporated into the licensing process and fed back to industry. Forward comments regarding burden estimate to the Records Management Branch (T-6 F33), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, and to the Paperwork Reduction Project (3150-0104), Office of Management and Budget, Washington, DC 20503. If 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.

FACILITY NAME (1) <b>PILGRIM NUCLEAR POWER STATION</b>	DOCKET NUMBER (2) <b>05000-293</b>	PAGE (3) <b>1 of 4</b>
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TITLE (4)  
**RCIC System Declared Inoperable During Surveillance Testing due to Procedure Error**

EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
10	06	2008	2008	003	00	11	20	2008	N/A	05000
									N/A	05000

OPERATING MODE (9) <b>N</b>	<b>THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR: (Check one or more) (11)</b>			
POWER LEVEL (10) <b>100</b>	20.2201(b)	22.2203(a)(3)(i)	50.73(a)(2)(i)(C)	50.73(a)(2)(vii)
	22.2202(d)	20.2203(a)(3)(ii)	50.73(a)(2)(ii)(A)	50.73(a)(2)(viii)(A)
	20.2203(a)(1)	20.2203(a)(4)	50.73(a)(2)(ii)(E)	50.73(a)(2)(viii)(B)
	20.2203(a)(2)(i)	50.36(3)(1)(i)(A)	50.73(a)(2)(iii)	50.73(a)(2)(ix)(A)
	20.2203(a)(2)(ii)	50.36(3)(1)(ii)(A)	50.73(a)(2)(iv)(A)	50.73(a)(2)(x)
	20.2203(a)(2)(iii)	50.36(c)(2)	50.73(a)(2)(v)(A)	73.71(a)(4)
	20.2203(a)(2)(iv)	50.46(a)(3)(ii)	50.73(a)(2)(v)(B)	73.71(a)(5)
	20.2203(a)(2)(v)	50.73(a)(2)(i)(A)	50.73(a)(2)(v)(C)	OTHER Specify in Abstract below or in NRC Form 366A
20.2203(a)(2)(vi)	50.73(a)(2)(i)(B)	X 50.73(a)(2)(v)(D)		

**LICENSEE CONTACT FOR THIS LER (12)**

NAME <b>Joseph Lynch – Licensing Manager</b>	TELEPHONE NUMBER (Include Area Code) <b>508-830-8403</b>
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**COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)**

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX
	<b>NO</b>	<b>COMPONENT</b>	<b>FAILURE</b>						

<b>SUPPLEMENTAL REPORT EXPECTED (14)</b>				<b>EXPECTED SUBMISSION DATE(15)</b>		MONTH	DAY	YEAR
YES (If yes, complete EXPECTED SUBMISSION DATE)	X	NO						

**ABSTRACT** (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines) (16)

On October 6, 2008, at 2224 hours, the Reactor Core Isolation Cooling (RCIC) System was declared inoperable. This action was taken because the RCIC system received an inadvertent Group 5 isolation signal during the performance of an Instrumentation and Control (I&C) surveillance. All isolations went to completion. RCIC was not operating at the time of the surveillance. The Group 5 isolation was reset and RCIC was placed in stand-by line up.

The cause of the event was due to an error introduced into the recently revised surveillance procedure. The restoration section of the procedure was sequenced incorrectly in that the procedure required the removal of control relay contact blocking devices (boots) prior to the resetting of the RCIC automatic isolation signal.

Immediate corrective action taken included the revision of the subject I&C surveillance procedure and an extent review of similar surveillance procedures. Corrective actions planned include the review of the procedure revision process and enhancements to the associated training programs.

The event posed no threat to public health and safety.

**LICENSEE EVENT REPORT (LER)**  
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TEXT (If more space is required, use additional copies of NRC Form 366A) (17)

### BACKGROUND

The Pilgrim Station Updated Final Safety Analysis Report (UFSAR) Section 4.7 pertains to the Reactor Core Isolation Cooling (RCIC) System. The system is designed to provide makeup water to the reactor vessel following reactor isolation in order to prevent the release of radioactive materials to the environment as a result of inadequate reactor core cooling. The system consists of a steam driven turbine-pump and associated valves and piping capable of delivering makeup water to the reactor vessel. The system can be operated automatically or manually, and is credited in the Pilgrim Station safety analysis for a design basis control rod drop accident. At a reactor pressure of 1126 psig, 320 gallons per minute (gpm) makeup from the RCIC System is sufficient to maintain reactor vessel water level above the top of active fuel. The RCIC System is capable of delivering 400 gpm to the reactor vessel over a range of reactor pressures, from 150 psig to 1126 psig.

On October 6, 2008 the RCIC Steam Line High Temperature Instrument Functional Test was being performed per Procedure 8.M.2-2.6.3; Revision 47, "RCIC Steam Line High Temperature." The test required the installation of relay contact boots on two (2) relays to reduce RCIC unavailability by preventing closure of RCIC steam supply line inboard and outboard isolation valves MO-1301-16 and MO-1301-17, respectively. These valves are in the Group 5 of the Primary Containment Isolation System (PCIS). This procedure was recently revised in August of 2008 to reduce RCIC unavailability during Technical Specification (TS) surveillance testing and this recent test was the first time this procedure revision was being worked in the field.

As part of this test, RCIC steam line break temperature switches which are in series (six (6) pairs), were tested together by installing a jumper across one normally open contact on one switch while applying heat to the second normally open temperature switch and observing the energizing of the subject initiation relay. This was re-performed by switching the jumper to the other switch and re-applying heat to the previously jumpered temperature switch in series. This was successfully performed on all twelve (12) temperature switches. However, upon approaching the restoration section of the surveillance test, the relay contact boots were removed per the incorrectly sequenced steps in the procedure prior to pushing in the associated reset buttons to clear the seal-in feature of the auto-isolation trip signals. The incorrectly sequenced steps were not recognized during the procedure technical review process or during the performance of the test.

### EVENT DESCRIPTION

On October 6, 2008, at 2224 hours, the RCIC System was declared inoperable with the plant at 100% power. No other plant equipment was out of service at the time. This action was taken because the RCIC System isolated on a Group 5 signal when relay blocking devices (boots) were removed during the performance of an I&C Surveillance procedure. This isolation was not part of the planned evolution. All isolations went to completion. RCIC was not operating at the time of the surveillance. The Group 5 isolation was reset and RCIC was placed in stand-by line up at 2327 hours on October 6, 2008.

A Technical Specification 3.5.D.2 limiting condition for operation was entered because the RCIC System was inoperable. The NRC Operations Center was notified of the event in accordance with 10 CFR 50.72 (b) (3) (v) (D) at 0301 hours on October 7, 2008.

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**CAUSE**

The root cause (RC) of this event was due to the station procedure revision process not being properly followed. A procedural error was introduced during the revision process and the changes were not properly verified or validated.

**CORRECTIVE ACTION**

The following corrective actions have been taken.

- The incorrect surveillance procedure has been revised.
- An extent of condition review was performed on five (5) procedures that were revised during the same effort to reduce out-of-service time on the RCIC and High Pressure Coolant Injection (HPCI) Systems during surveillances. Those procedures were reviewed and corrected as necessary to address the issues brought forth in this event. Additional procedure changes were validated and technically reviewed as part of the extent of condition actions.
- Reinforced responsibilities and expectations with the individuals involved in following the procedure revision process.

The following corrective action is planned.

- The creation of a Computer Based Training (CBT) Module for procedure owners, technical reviewers, validators, and writers to become qualified in the procedure revision process.

These corrective actions are being tracked in the Corrective Action Program (CAP) under Condition Report CR-PNP-2008-3182 and may be modified in accordance with the CAP.

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### SAFETY CONSEQUENCES

The event posed no threat to public health and safety.

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

The RCIC System functions to provide high pressure makeup water to the reactor vessel after isolation of the vessel. When the RCIC System was inadvertently isolated for approximately one (1) hour, the High Pressure Coolant Injection (HPCI) System was operable while the RCIC System was inoperable. The HPCI System is designed to provide high pressure core cooling over a range of reactor pressures, similar to the RCIC System. If the HPCI System were to become inoperable while the RCIC System was inoperable and core cooling was necessary, the Automatic Depressurization System (ADS) functions to depressurize the reactor vessel for low pressure core cooling provided independently by the Residual Heat Removal (RHR) System (low pressure coolant injection mode) and/or Core Spray (CS) System. Since the RCIC System was able to be restored to an operable status following the inadvertent isolation, there was no long term safety significance associated with this event.

### REPORTABILITY

This report was submitted in accordance with 10 CFR 50.73(a) (2) (v) (D) because the failure to reset the RCIC System due a procedural error caused the system to be unable to perform its safety function. Additionally, the actuation of the PCIS Group 5 circuitry is an automatic actuation of an Engineered Safety Feature (ESF) System and made RCIC, a single train system that is credited in the Pilgrim Station Design Basis Control Rod Drop Accident Analysis, inoperable.

### SIMILARITY TO PREVIOUS EVENTS

A review was conducted of Pilgrim Station LERs issued since 1998. The review focused on LERs that involved a similar event related to a procedural error or errors in the RCIC or HPCI Systems. Although, the review identified a reportable procedural error event that occurred in August, 2001, none were found involving the RCIC or HPCI Systems.

### ENERGY INDUSTRY IDENTIFICATION SYSTEM (EIIS) CODES

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

COMPONENTS	CODES
Valve, Isolation (MO-1301-16, MO-1301-17)	ISV
<b>SYSTEMS</b>	
Reactor Core Isolation Cooling System (RCIC)	BN
Containment Isolation Control System (PCIS)	JM