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

June 9, 2016

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

SUBJECT: Licensee Event Report 2016-001-00, Both Emergency Diesel Generators Inoperable

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

LETTER NUMBER: 2.16.030

Dear Sir or Madam:

The enclosed Licensee Event Report (LER) 2016-001-00, Both Emergency Diesel Generators Inoperable, is submitted in accordance with 10 CFR 50.73.

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

This letter contains no commitments.

Sincerely,

Everett P. Perkins, Jr.
Manager, Regulatory Assurance

EPP/fxm

Attachment : Licensee Event Report 2016-001-00, Both Emergency Diesel Generators Inoperable (4 pages)

IE22
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 2.16.030

Licensee Event Report 2016-001-00

Both Emergency Diesel Generators Inoperable
(4 Pages)

NRC FORM 366 (11-2015) U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB: NO. 3150-0104 EXPIRES: 10/31/2018

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.

LICENSEE EVENT REPORT (LER)

1. FACILITY NAME	2. DOCKET NUMBER	3. PAGE
Pilgrim Nuclear Power Station	05000293	1 OF 4

4. TITLE

Both Emergency Diesel Generators 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
									N/A	N/A
04	12	2016	2016	001	00	06	09	2016	FACILITY NAME N/A	DOCKET NUMBER N/A

9. OPERATING MODE	11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: *(Check all that apply)*			
N	☐ 20.2201(b)	☐ 20.2203(a)(3)(i)	☐ 50.73(a)(2)(ii)(A)	☐ 50.73(a)(2)(viii)(A)
	☐ 20.2201(d)	☐ 20.2203(a)(3)(ii)	☐ 50.73(a)(2)(ii)(B)	☐ 50.73(a)(2)(viii)(B)
	☐ 20.2203(a)(1)	☐ 20.2203(a)(4)	☐ 50.73(a)(2)(iii)	☐ 50.73(a)(2)(ix)(A)
	☐ 20.2203(a)(2)(i)	☐ 50.36(c)(1)(i)(A)	☐ 50.73(a)(2)(iv)(A)	☐ 50.73(a)(2)(x)
10. POWER LEVEL	☐ 20.2203(a)(2)(ii)	☐ 50.36(c)(1)(ii)(A)	☒ 50.73(a)(2)(v)(A)	☐ 73.71(a)(4)
	☐ 20.2203(a)(2)(iii)	☐ 50.36(c)(2)	☒ 50.73(a)(2)(v)(B)	☐ 73.71(a)(5)
	☐ 20.2203(a)(2)(iv)	☐ 50.46(a)(3)(ii)	☐ 50.73(a)(2)(v)(C)	☐ 73.77(a)(1)
100	☐ 20.2203(a)(2)(v)	☐ 50.73(a)(2)(i)(A)	☒ 50.73(a)(2)(v)(D)	☐ 73.77(a)(2)(i)
	☐ 20.2203(a)(2)(vi)	☐ 50.73(a)(2)(i)(B)	☐ 50.73(a)(2)(vii)	☐ 73.71(a)(2)(ii)
		☐ 50.73(a)(2)(i)(C)	☐ OTHER Specify in Abstract below or in NRC Form 366A	

12. LICENSEE CONTACT FOR THIS LER

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

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
B	LB	PSF	I027	Y					

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

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

On April 12, 2016 at 0050 hours, with the reactor at 100% power and the mode switch in RUN, Pilgrim Nuclear Power Station (PNPS) entered an unplanned 24-hour Limiting Condition for Operation (LCO) Action Statement per Technical Specification 3.5.F.1 due to both emergency diesel generators (EDG) being inoperable. With EDG B out of service for a planned LCO maintenance window, EDG A was declared inoperable due to identification of an approximate leak of 130 drops per minute (dpm) from the line to the jacket water pressure indication.

The apparent cause of the EDG A jacket water pressure boundary leak was stress corrosion cracking (SCC) that eventually led to failure of a bulkhead pipe fitting. The apparent cause was confirmed by the failure analysis performed. Corrective action was taken to replace the leaking bulkhead pipe fitting on EDG A to restore EDG Operability. An aditional corrective action is planned to replace the opposite train EDG jacket water bulkhead pipe fitting.

There was no impact to public health and safety.

NRC FORM 366 (11-2015) U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB: NO. 3150-0104 EXPIRES: 10/31/2018

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LICENSEE EVENT REPORT (LER) CONTINUATION SHEET

1. FACILITY NAME	2. DOCKET NUMBER	3. LER NUMBER		
		YEAR	SEQUENTIAL NUMBER	REV NO.
Pilgrim Nuclear Power Station	05000293	2016	001	00

NARRATIVE

BACKGROUND

The standby alternating current (AC) power source provides two independent diesel generators as the onsite source of AC power to the emergency service portions of the station Auxiliary Power Distribution System. Each onsite source provides AC power to safely shut down the reactor, maintain the safe shutdown condition, and operate all auxiliaries necessary for station safety.

On April 10, 2016 at 1900 hours, Emergency Diesel Generator (EDG) B was tagged out of service for planned preventative maintenance.

EVENT DESCRIPTION

At approximately 2130 hours on April 11, 2016, as part of the Operators outside tour of the EDG building, the Operator on tour reported a water leak from the C103C panel trailing across the EDG A floor towards the floor drain. This leak was evaluated and determined to be a leak in the EDG A Cooling Water System (EIIS code = LB) pressure boundary. The leak rate was determined to be approximately 130 drops per minute (dpm). At 0050 hours on April 12, 2016, EDG A was declared inoperable due to the jacket water pressure boundary leak. PNPS entered an unplanned 24-hour LCO Action Statement per Technical Specification 3.5.F.1 because both EDGs were Inoperable.

The pipe fitting was replaced and EDG A was restored to operable status at 1059 hours on April 12, 2016.

CAUSE OF THE EVENT

The apparent cause of the EDG A jacket water pressure boundary leak was identified to be stress corrosion cracking (SCC) of the bulkhead pipe fitting. The pipe fitting was original plant equipment manufactured by Imperial–Eastman Corp (EIIS code = I027), and was identified on plant drawings as Part #1298 Anchor Coupling (EIIS Code = PSF).

CORRECTIVE ACTIONS

The leaking anchor coupling bulkhead fitting on EDG A was replaced to restore EDG A operability.

Additional corrective actions were issued to mitigate the likelihood of event recurrence. These additional actions include: Procedure enhancement to inspect the opposite train EDG cabinets prior to performing scheduled maintenance on either EDG; and action to replace both EDG A and B anchor coupling pipe fittings associated with the jacket water pressure instruments with new fittings.

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LICENSEE EVENT REPORT (LER) CONTINUATION SHEET

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Pilgrim Nuclear Power Station	05000293	2016	001	00

NARRATIVE

SAFETY CONSEQUENCES

The standby AC power source provides two independent diesel generators as the onsite source of AC power to the emergency service portions of the station Auxiliary Power Distribution System. Each onsite source provides AC power to safely shut down the reactor, maintain the safe shutdown condition, and operate all auxiliaries necessary for station safety.

The safety objective of the standby AC power source is to provide a single failure proof source of onsite AC power adequate for the safe shutdown of the reactor following abnormal operational transients and postulated accidents.

The unit AC power source provides AC power to all station auxiliaries and is the normal station AC power source when the main generator is operating. The station preferred (offsite) AC power source provides AC power to all station auxiliaries required for startup and shutdown and is normally in use when the unit AC power source is unavailable. The secondary (offsite) AC power source provides AC power to essential station auxiliaries. It is used to supply essential station auxiliary loads only when the main generator is shut down, there is a failure of the preferred AC power source, and failure of a standby AC power source.

The Station Blackout AC Power Source provides an independent diesel generator as the onsite source of AC power to the emergency service portions of the Auxiliary Power Distribution System in the unlikely event of a loss of preferred and secondary offsite power sources combined with a complete failure of the Standby AC Power System.

At the time of the event, the preferred AC and the secondary AC power sources were Operable and available to perform their intended safety function. In addition, the Station Blackout AC Power Source was Functional and available as the onsite source of AC power to the emergency service portions of the Auxiliary Power Distribution System.

Based on the operable and available preferred and secondary power sources, there was no adverse impact on the public health or safety.

REPORTABILITY

This report is submitted in accordance with 10 CFR 50.73(a)(2)(v)(A), 50.73(a)(2)(v)(B), and 50.73(a)(2)(v)(D) for a condition that could have prevented the fulfillment of the safety function of a system needed to shut down the reactor and maintain it in a safe shutdown condition, remove residual heat, and mitigate the consequences of an accident.

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Pilgrim Nuclear Power Station	05000293	2016	001	00

NARRATIVE

PREVIOUS EVENTS

Events involving LERs where both EDGs were inoperable were reviewed. These LERs are summarized as follows:

LER 99-006-00, LER 97-021-00, and LER 97-027-00 involved events where both emergency diesel generators were declared inoperable due to high ambient air temperatures. LER 98-004-00 and LER 98-002-00 involved events where both EDGs were declared inoperable due to low ambient temperatures.

These prior LERs involved events where both EDGs were declared inoperable at the same time; however, the events are different because equipment failure and EDG maintenance was not involved.

ENERGY INDUSTRY IDENTIFICATION SYSTEM (EIIS) CODES

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

COMPONENTS	CODES
Pipe Fitting	PSF

SYSTEMS	CODES
Diesel Cooling Water System	LB

REFERENCES:

Condition Report CR-PNP-2016-2537