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**FPL Energy.**

**Duane Arnold Energy Center**

June 11, 2007

NG-07-0495  
10 CFR 50.73

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

Duane Arnold Energy Center  
Docket 50-331  
License No. DPR-49

Licensee Event Report #2007-008-00

Please find attached the subject Licensee Event Report (LER) submitted in accordance with 10 CFR 50.73. This letter makes no new commitments or changes to any existing commitments.

Gary Van Middlesworth  
Site Vice President, Duane Arnold Energy Center  
FPL Energy Duane Arnold, LLC

cc: Administrator, Region III, USNRC  
Project Manager, DAEC, USNRC  
Resident Inspector, DAEC, USNRC

IE22  
NRC/NRR

**LICENSEE EVENT REPORT (LER)**

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

Estimated burden per response to comply with this mandatory collection request: 50 hours. 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 [infocollect@nrc.gov](mailto:infocollect@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> Duane Arnold Energy Center	<b>2. DOCKET NUMBER</b> 05000 331	<b>3. PAGE</b> 1 OF 4
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**4. TITLE**  
Condition Prohibited by Technical Specifications; 'B' Emergency Diesel 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
04	11	2007	2007	8	0	06	11	2007		05000
									FACILITY NAME	DOCKET NUMBER
										05000

<b>9. OPERATING MODE</b> 1	<b>11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §:</b> (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)(i)(C)	<input type="checkbox"/> 50.73(a)(2)(vii)								
<b>10. POWER LEVEL</b> 100	<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)								
	<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 checked="" type="checkbox"/> 50.73(a)(2)(i)(B)	<input type="checkbox"/> 50.73(a)(2)(v)(D)	Specify in Abstract below or in NRC Form 366A									

**12. LICENSEE CONTACT FOR THIS LER**

FACILITY NAME Bob Murrell, Engineering Analyst	TELEPHONE NUMBER (Include Area Code) (319) 851-7900
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**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

<b>14. SUPPLEMENTAL REPORT EXPECTED</b>	<b>15. EXPECTED SUBMISSION DATE</b>	MONTH	DAY	YEAR
<input type="radio"/> YES (If yes, complete 15. EXPECTED SUBMISSION DATE)	<input checked="" type="radio"/> NO			

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

On April 11, 2007, while operating at 100% power, during STP 3.8.1-04 for the 'B' Emergency Diesel Generator (EDG), a 0.21 gallon per minute lube oil leak from the Lube Oil Filter (LOF) was observed. The engine was shutdown and investigation determined that an incorrect o-ring had been installed. The o-ring was installed on February 12, 2007 under Preventative Work Order 1135811 during a cylinder liner replacement in Refuel Outage (RFO) 20. A past operability evaluation has determined that the 'B' EDG was inoperable from February 12, 2007 until time of discovery. The lube oil filter o-ring was replaced to correct the leak, and the EDG was subsequently declared operable on April 12, 2007.

The cause of this event was the installation of a wrong sized o-ring during RFO 20.

There were no actual safety consequences and no effect on public health and safety as a result of this event due to the fact that the EDG was functional during this time period.

## LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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Duane Arnold Energy Center	05000331	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	2 of 4
		2007	-- 008	-- 00	

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

### I. Description of Event:

The 'B' Emergency Diesel Generator (EDG) Lube Oil Filter (LOF) o-ring was replaced on 2/12/07 during a cylinder liner replacement during Refuel Outage (RFO) 20. The LOF o-ring replacement was conducted by vendor service mechanics.

The 'B' EDG was operated between 2/12/07 and 3/24/07 for greater than 52 hours with no indication of any leak from the LOF.

On 3/25/07 during the performance of Surveillance Test Procedure (STP) 3.8.1-04, "Standby Diesel Generators Operability Test," a minor leak was identified. At the time, the leak was identified as minor with no effect on operability. Corrective Work Order (CWO) A77495 was initiated to repair the minor leak when scheduled.

On 4/11/07, during a performance of STP 3.8.1-04, following preplanned maintenance, a 0.21 gallon per minute lube oil leak from the LOF was observed. Specifically, during the initial start for the STP, the o-ring joint for the LOF developed a significant leak and the engine was shutdown. The engine remained inoperable until the leak was repaired later on 4/11/07.

### II. Assessment of Safety Consequences:

A detailed past operability evaluation was completed. Although the EDG was not capable of performing its Technical Specification (TS) mission time of 7 days, the EDG was proven by analysis to operate for 27 hours without any operator intervention prior to failure.

Since the diesel generator past operability evaluation proved that the EDG would operate for at least 24 hours without manual actions, there is no noticeable risk impact due to the degradation of the diesel generator. The risk impact is negligible because the probability of losing offsite power for a time period longer than 24 hours is very low. In addition, many other onsite and offsite resources become available to mitigate any undesirable conditions (e.g., repairing of any deficient equipment or using alternate means of achieving safety functions).

The 'A' EDG has same LOF and o-ring configuration. No issues involving leaks on that LOF have been identified. That o-ring was replaced during the last 2-year inspection (not at the same time as the 'B' EDG). No concern exists based on the time in-service.

This event did not result in a Safety System Functional Failure.

### III. Cause of Event:

An investigation into this event was completed under Apparent Cause Evaluation (ACE) 1719.

The ACE determined the apparent cause for the 'B' EDG LOF leak was the installation of the wrong o-ring during RFO20.

## LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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TEXT (If more space is required, use additional copies of NRC Form 366A) (17)

The following possibilities as to why the wrong sized o-ring could have been installed were investigated and eliminated as the cause:

1. Wrong o-ring supplied to warehouse from vendor
2. Wrong o-ring provided by warehouse to workers
3. Wrong o-ring brought in by vendor
4. Wrong o-ring returned to stock

Therefore, based on the results of the investigation, the exact cause of using the wrong sized o-ring could not be determined. However, the process of using commercial grade soft goods is being reviewed.

#### IV. Corrective Actions:

##### Actions to Correct the Condition:

CWO A77913 replaced the LOF o-ring for the 'B' EDG. Following the replacement of the o-ring the engine was run with no identified leaks.

##### Corrective Action to Address the Apparent Cause:

###### Review O-Ring procurement and quality level process

The evaluation will review the procurement and quality level process for o-rings.

###### Development of the lessons learned from the cylinder liner work in RFO20.

This event will be incorporated into the work planning for the cylinder liner replacement on the 'A' EDG in RFO21. This CA will incorporate all improvements for oversight and pre-job brief expectations.

#### V. Additional Information:

##### Previous Similar Occurrences:

From LER reviews over the previous 5 years, the following similar occurrence was identified:

LER 2003-003 - Operation in a TS Prohibited Condition; Violation of LCO 3.0.4. for Mode Change with LPCI in an LCO for Suppression Pool Cooling

##### EIS System and Component Codes:

LA - Diesel Lube Oil System

# LICENSEE EVENT REPORT (LER)

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Reporting Requirements:

This report is being submitted pursuant to 10CFR50.73(a)(2)(i)(B).