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 AUTH. NAME AUTHOR AFFILIATION
 RAGER, M. S. Iowa Electric Light & Power Co.
 RECIP. NAME: RECIPIENT AFFILIATION
 Region 3, Chicago, Office of the Director

SUBJECT: Updated LER 80-012/01X-1: on 800317, standby diesel generator
 1G-31 lower crankshaft thrust bearing 13 was found wiped on
 Journal surface. Caused by bearing/crankshaft clearance out
 of spec & low oil sump level. Sump filled. Bearing replaced.

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MAY 01 1981

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Iowa Electric Light and Power Company

April 24, 1981
DAEC-81-262

Mr. James G. Keppler, Director
Office of Inspection and Enforcement
U. S. Nuclear Regulatory Commission - Region III
799 Roosevelt Road
Glen Ellyn, IL 60137

Subject: Licensee Event Report No. 80-012 UPDATE REPORT:
(14 day) Previous Report
Date 3-31-80
File: A-118a

Dear Mr. Keppler:

In accordance with Appendix A to Operating License DPR-49, Technical Specifications and Bases for Duane Arnold Energy Center and Regulatory Guide 10.1, please find attached a copy of the subject Licensee Event Report. (Total of 3 copies transmitted).

Very truly yours,



Daniel L. Mineck
Chief Engineer
Duane Arnold Energy Center

Docket 50-331

attachment

DLM/MSR/pl

cc: Director, Office of Inspection and Enforcement (40)
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Director, Management Information and Program Control (3)
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

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Washington, D. C. 20555

NRC Resident Inspector - DAEC

AO/I
4

APR 29 1981

LICENSEE EVENT REPORT

U.S. NUCLEAR REGULATORY COMMISSION
DATE REPORT:
Previous Report Date 3-31-80

CONTROL BLOCK: _____ (PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

0 1 | I A D A C I | 2 | 0 0 - 0 0 0 0 0 0 - 0 0 | 3 | 4 1 1 1 1 | 4 | _____ | 5
7 8 9 14 15 LICENSE NUMBER 25 28 LICENSE TYPE 30 37 CAT 38

0 1 | REPORT SOURCE | L | 6 | 0 5 0 0 0 3 3 1 | 7 | 0 3 1 7 8 0 | 8 | 0 4 2 4 8 1 | 9
7 8 60 61 DOCKET NUMBER 68 69 EVENT DATE 74 75 REPORT DATE 80

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

0 2 | During the annual inspection of standby diesel gen. 1G-31, the lower
0 3 | crankshaft thrust #13 bearing was found wiped on the journal surface.
0 4 | Further investigation revealed bearing/crankshaft clearance out of spec.
0 5 | and low lube oil sump level. Level was maintained in accordance with
0 6 | vendor manual. Redundant standby diesel 1G-21 annual inspection reveal
0 7 | ed similar problems (See R0 80-011). Diesel generator operability requir
0 8 | ements are given in T.S.3.8.A.2. See also R0 Reports 77-32 and 78-020.
7 8 9

0 9 | SYSTEM CODE | CAUSE CODE | CAUSE SUBCODE | COMPONENT CODE | COMP. SUBCODE | VALVE SUBCODE |
| E E | X | Z | E N G I N E | Z | Z |
9 10 11 12 13 18 19 20

17 | LER/RO REPORT NUMBER | EVENT YEAR | SEQUENTIAL REPORT NO. | OCCURRENCE CODE | REPORT TYPE | REVISION NO.
| 8 0 | - | 0 1 2 | / | 0 1 | X | - | 1 |
21 22 23 24 26 27 28 29 30 31 32

ACTION TAKEN | FUTURE ACTION | EFFECT ON PLANT | SHUTDOWN METHOD | HOURS | ATTACHMENT SUBMITTED | NPRO-4 FORM SUB. | PRIME COMP. SUPPLIER | COMPONENT MANUFACTURER
| A | X | Z | Z | 0 0 0 0 | Y | N | A | C 4 7 0 |
33 34 35 36 37 40 41 42 43 44 47

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

1 0 | Vendor study revealed bearing/crankshaft clearance was out of spec. Vend
1 1 | or analysis resulted in installation of bearings to provide mid-range lo
1 2 | wer crankshaft end float. Lube oil sump was filled; dipstick mark revise
1 3 | d per vendor recommendations. Crankshaft was relapped and Gen. was test-
1 4 | led sat. Additional invest. reqd due to problems found during 1981 refuel.
7 8 9

1 5 | FACILITY STATUS | % POWER | OTHER STATUS | METHOD OF DISCOVERY | DISCOVERY DESCRIPTION
| H | 0 0 0 0 | NA | B | Annual Surveillance Test
7 8 9 10 12 13 44 45 46 80

1 6 | ACTIVITY CONTENT | AMOUNT OF ACTIVITY | LOCATION OF RELEASE
| 7 | 7 | NA | NA
7 8 9 10 11 44 45 80

1 7 | PERSONNEL EXPOSURES NUMBER | TYPE | DESCRIPTION
| 0 0 0 | Z | NA
7 8 9 11 12 13 80

1 8 | PERSONNEL INJURIES NUMBER | DESCRIPTION
| 0 0 0 | NA
7 8 9 11 12 13 80

1 9 | LOSS OF OR DAMAGE TO FACILITY TYPE | DESCRIPTION
| 7 | NA
7 8 9 10 11 12 13 80

2 0 | PUBLICITY ISSUED | DESCRIPTION
| N | NA
7 8 9 10 11 12 13 80

NRC USE ONLY

NAME OF PREPARER Matthew S. Rager PHONE: 319-851-5611

GPO 01-7-92 6

Iowa Electric Light and Power Company

LICENSEE EVENT REPORT-Supplemental Data

Docket No. 050-0331

Licensee Event Update Report: April 24, 1981

Reportable Occurrence No: 80-012 UPDATE REPORT:
Previous Report Date
3-31-80

Event Description

During the annual inspection of standby diesel generator 1G-31, the lower crankshaft #13 thrust bearing was found wiped on the journal surface. Further investigation revealed that the lubrication oil sump level was low such that there may have been insufficient lubrication of the #13 thrust bearing. Redundant standby diesel generator 1G-21 annual inspection revealed similar problems (See RO Report 80-011). Although both diesel generators were operable at the time of the surveillance testing, extended operation, without corrective action, could have resulted in the bearing failure. Standby diesel generator operability requirements are listed in Technical Specification 3.8.A.2. There have been two similar RO Reports previously submitted (See RO 77-32 and 78-20). This unit is a Fairbanks Morse Model 3800 TD8-1/8.

Cause Description

Vendor representative indicated the diesel #13 thrust bearing to crankshaft clearance was found out of specification (too small). Vendor analysis recommended the installation of bearings to provide for mid-range lower crankshaft end float. The engine lube oil sump level was maintained in accordance with the manufacturer's technical manual. However, the vendor representative indicated that the level was incorrect. The "full" mark on the sump dipstick was relabelled "running full" and a new higher "shutdown" full level mark was added to the stick to preclude improper sump fill in the future. Although insufficient lubrication may or may not have contributed to this event, lack of lubrication could have eventually caused bearing failure.

Corrective Action

The diesel thrust bearing was replaced with a factory modified bearing to provide the recommended clearance. The diesel generator was reassembled and retested satisfactorily.

The lubrication oil sump dipstick was marked to indicate a full level position with the unit shutdown in addition to the full level position when in the operating mode. This relabelling of the dipstick should eliminate improper sump filling in the future. Oil was added to fill the sump to the proper level. The appropriate operating procedure has been revised to reflect the new dipstick markings.

Additional engineering investigation work is planned since a similar wiped bearing problem was discovered while performing the annual inspection of standby diesel generator 1G-31 during the 1981 refueling outage.