NRC FORM 366 (7-77)

U. S. NUCLEAR REGULATORY COMMISSION

UPDATE REPORT

PREVIOUS REPORT DATES: 3/29/82 and 4/5/82

LICENSEE EVENT REPORT

CONTROL BLOCK: [| | | | | |] (1) (PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

01 | LICENSEE CODE: IADAC1 (2) | LICENSE NUMBER: 00-00000-00 (3) | LICENSE TYPE: 41111 (4) | CAT (5)

CON'T

01 | REPORT SOURCE: L (6) | DOCKET NUMBER: 05000331 (7) | EVENT DATE: 031582 (8) | REPORT DATE: 042382 (9)

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

02 During normal operation while performing surveillance testing, standby d
03 iesel generator 1G-21 tripped in start sequence. As required by Technica
04 l Specification 3.8.B.1, a 7-day LCO was entered. The redundant diesel g
05 enerator was operable. The 7-day LCO ended after approximately 8 hours w
06 hen 1G-21 was made operable. Subsequent testing demonstrated engine woul
07 d have started with an auto start signal present. There have been no pre
08 vious similar occurrences.

	SYSTEM CODE	CAUSE CODE	CAUSE SUBCODE	COMPONENT CODE	COMP SUBCODE	VALVE SUBCODE
09	EE (11)	D (12)	Z (13)	FILTER (14)	Z (15)	Z (16)

(17) LER/RO REPORT NUMBER	EVENT YEAR		SEQUENTIAL REPORT NO.		OCCURRENCE CODE	REPORT TYPE		REVISION NO.
	82	—	020	/	01	X	—	2

ACTION TAKEN	FUTURE ACTION	EFFECT ON PLANT	SHUTDOWN METHOD	HOURS (22)	ATTACHMENT SUBMITTED	NPRD-4 FORM SUB.	PRIME COMP. SUPPLIER	COMPONENT MANUFACTURER
E (18)	G (19)	Z (20)	Z (21)	0000	Y (23)	N (24)	A (25)	C470 (26)

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

10 Diesel trip caused by procedural deficiency which allowed both fuel oil
11 filters on 1G-21 to be changed without properly filling and venting the
12 filter casings. This caused the engine to trip from fuel starvation. Fue
13 l oil system was primed and vented and engine tested sat. To preclude re
14 currence, maintenance procedures have been written.

15 | FACILITY STATUS: E (28) | % POWER: 090 (29) | OTHER STATUS (30): NA | METHOD OF DISCOVERY: B (31) | DISCOVERY DESCRIPTION (32): Surveillance Test

16 | ACTIVITY RELEASED: Z (33) | CONTENT OF RELEASE: Z (34) | AMOUNT OF ACTIVITY (35): NA | LOCATION OF RELEASE (36): NA

PERSONNEL EXPOSURES

17 | NUMBER: 000 (37) | TYPE: Z (38) | DESCRIPTION (39): NA

PERSONNEL INJURIES

18 | NUMBER: 000 (40) | DESCRIPTION (41): NA

8204300401

LOSS OF OR DAMAGE TO FACILITY (43)

19 | TYPE: Z (42) | DESCRIPTION: NA

PUBLICITY

20 | ISSUED: N (44) | DESCRIPTION (45): NA | NRC USE ONLY

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DUANE ARNOLD ENERGY CENTER

Iowa Electric Light and Power Company

Licensee Event Report - Supplemental Data

Docket No. 050-0331

Licensee Event Update Report Date: 4/23/82

Reportable Occurrence No: 82-020

Event Description:

During normal operation while performing the monthly surveillance testing, standby diesel generator 1G-21 tripped in the start sequence before reaching the rated frequency and voltage. As required by Technical Specification 3.8.B.1 for an inoperable diesel generator, a 7-day limiting condition for operation (LCO) was entered. The redundant standby diesel generator, 1G-31 was operable. The 7-day LCO was ended after approximately 8 hours when 1G-21 was made operable. There have been no similar previous occurrences.

Cause Description:

The diesel generator trip was caused by a procedural deficiency which allowed both fuel oil filters on diesel generator 1G-21 to be changed on February 25, 1982 without requiring that the filter casings be properly filled and vented. This caused 1G-21 to trip from fuel starvation during the start sequence.

At the time, it was mistakenly believed that the fuel oil filters were to be changed without making the diesel generator inoperable. Thus 1G-21 was not declared inoperable when its filters were changed. For the same reason, post maintenance operability testing was not performed.

Corrective Action:

The fuel oil system for diesel generator 1G-21 was primed and vented. Then 1G-21 was functionally tested satisfactorily and made operable to end the 7-day LCO entered that day.

To prevent recurrence, maintenance procedures for diesel generator fuel oil filter maintenance have been developed.

Administrative controls will be modified to assure post maintenance operability of safety related equipment. These changes will include a mechanism to ensure that safety related maintenance is performed in accordance with adequate maintenance procedures. In addition, an independent review by qualified personnel to verify the adequacy of post maintenance operability testing will be required. These changes will be in place by May 15, 1982.

DUANE ARNOLD ENERGY CENTER

Iowa Electric Light and Power Company

Licensee Event Report - Supplemental Data

Docket No. 050-0331

Licensee Event Update Report Date: 4/23/82

Reportable Occurrence No: 82-020

Corrective Action: (Cont.)

Special testing was performed on 4/4/82 which simulated an automatic start of the 1G-21 standby generator. Prior to the test, the conditions present after the maintenance was performed on February 25, 1982 were recreated, i.e., the fuel oil filters were changed and the filter casings were not refilled with fuel oil.

During the first test 1G-21 started and reached rated speed and voltage 30.2 seconds after automatic start initiation. The time specified in the DAEC FSAR is 10 seconds. A second test was conducted during which 1G-21 reached rated speed and voltage in 30.3 seconds. The completed test procedures are available for review on site. This testing was witnessed by the NRC Resident Inspector.

The NSSS vendor completed an evaluation of the effect of this delayed start time for diesel generator 1G-21 on the DAEC design basis accident analysis. For the purposes of this evaluation, the design basis accident was assumed to occur with a loss of off-site power, the worst single failure (LPCI injection valve failure), and a 60-second delay in the start of diesel generator 1G-21. This evaluation concluded that the peak clad temperature (PCT) resulting from the above accident would be well below the 2200°F PCT 10CFR50, Appendix K licensing limit and that the delayed start time for diesel generator 1G-21 would not have unacceptably affected the plant's response to such an accident.