REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 8708190355 DOC. DATE: 87/08/14 NOTARIZED: NO DOCKET #
FACIL: 50-251 Turkey Point Plant, Unit 4, Florida Power and Light C 05000251
AUTH. NAME AUTHOR AFFILIATION
HART, R. D. Florida Power & Light Co.
WOODY, C. O. Florida Power & Light Co.
RECIP. NAME RECIPIENT AFFILIATION

SUBJECT: LER 87-016-00: on 870715, automatic actuation of intake cooling water pump occurred. Caused by ground on pump motor. Pump replaced & satisfactorily tested. W/870814 ltr.

DISTRIBUTION CODE: IE22D COPIES RECEIVED: LTR 1 ENCL 1 SIZE: 4
TITLE: 50.73 Licensee Event Report (LER), Incident Rpt, etc.

NOTES:

| | RECIPIENT ID CODE/NAME | COPIES LTTR | COPIES ENCL | RECIPIENT ID CODE/NAME | COPIES LTTR | COPIES ENCL |
|---|---|---|---|---|---|---|
| | PD2-2 LA | 1 | 1 | PD2-2 PD | 1 | 1 |
| | McDONALD, D | 1 | 1 | | | |
| INTERNAL: | ACRS MICHELSON | 1 | 1 | ACRS MOELLER | 2 | 2 |
| | AEOD/DOA | 1 | 1 | AEOD/DSP/NAS | 1 | 1 |
| | AEOD/DSP/ROAB | 2 | 2 | AEOD/DSP/TPAB | 1 | 1 |
| | DEDRO | 1 | 1 | NRR/DEST/ADS | 1 | 0 |
| | NRR/DEST/CEB | 1 | 1 | NRR/DEST/ELB | 1 | 1 |
| | NRR/DEST/ICSB | 1 | 1 | NRR/DEST/MEB | 1 | 1 |
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| | NRR/DOEA/EAB | 1 | 1 | NRR/DREP/RAB | 1 | 1 |
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| | REG FILE 02 | 1 | 1 | RES DEPY GI | 1 | 1 |
| | RES TELFORD, J | 1 | 1 | RES/DE/EIB | 1 | 1 |
| | RGN2 FILE 01 | 1 | 1 | | | |
| EXTERNAL: | EG&G GROH, M | 5 | 5 | H ST LOBBY WARD | 1 | 1 |
| | LPDR | 1 | 1 | NRC PDR | 1 | 1 |
| | NSIC HARRIS, J | 1 | 1 | NSIC MAYS, G | 1 | 1 |

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NRC Form 366
(9-83)

U.S. NUCLEAR REGULATORY COMMISSION
APPROVED OMB NO. 3150-0104
EXPIRES: 8/31/88

# LICENSEE EVENT REPORT (LER)

| FACILITY NAME (1) | DOCKET NUMBER (2) | PAGE (3) |
|---|---|---|
| Turkey Point Unit 4 | 0 5 0 0 0 2 5 1 | 1 OF 0 3 |

TITLE (4) Engineered Safety Features Actuation: Automatic Start of the 4C Intake Cooling Water Pump When 4A ICW Pump Tripped on Overcurrent Due to Ground on Pump Motor

| 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 NAMES | DOCKET NUMBER(S) |
| | | | | | | | | | N/A | 0 5 0 0 0 |
| 0 7 | 1 5 | 8 7 | 8 7 | — 0 1 6 | — 0 0 | 0 8 | 1 4 | 8 7 | N/A | 0 5 0 0 0 |

| OPERATING MODE (9) | 1 | THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11) | | | | | |
|---|---|---|---|---|---|---|---|
| POWER LEVEL (10) | 0 9 0 | 20.402(b) | 20.405(c) | X | 50.73(a)(2)(iv) | | 73.71(b) |
| | | 20.405(a)(1)(i) | 50.36(c)(1) | | 50.73(a)(2)(v) | | 73.71(c) |
| | | 20.405(a)(1)(ii) | 50.36(c)(2) | | 50.73(a)(2)(vii) | | OTHER (Specify in Abstract below and in Text, NRC Form 366A) |
| | | 20.405(a)(1)(iii) | X 50.73(a)(2)(i) | | 50.73(a)(2)(viii)(A) | | |
| | | 20.405(a)(1)(iv) | 50.73(a)(2)(ii) | | 50.73(a)(2)(viii)(B) | | |
| | | 20.405(a)(1)(v) | 50.73(a)(2)(iii) | | 50.73(a)(2)(x) | | |

LICENSEE CONTACT FOR THIS LER (12)

| NAME | TELEPHONE NUMBER |
|---|---|
| | AREA CODE |
| Randall D. Hart, Licensing Engineer | 3 0 5 — 2 4 6 - 6 5 5 9 |

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

| CAUSE | SYSTEM | COMPONENT | MANUFACTURER | REPORTABLE TO NPRDS | | CAUSE | SYSTEM | COMPONENT | MANUFACTURER | REPORTABLE TO NPRDS | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| X | B I | M O | I 2 8 0 | Y | | | | | | | |
| | | | | | | | | | | | |

| SUPPLEMENTAL REPORT EXPECTED (14) | | EXPECTED SUBMISSION DATE (15) | MONTH | DAY | YEAR |
|---|---|---|---|---|---|
| YES (If yes, complete EXPECTED SUBMISSION DATE) | X NO | | | | |

ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16)


On July 15, 1987, while Unit 4 was at 90% power, an automatic actuation of the 4C intake cooling water (ICW) pump occurred. On July 15, 1987, an alarm was received in the control room for 4 KV Bus 4A or 4B Ground. Approximately 3 minutes later the 4A ICW pump tripped and the 4C ICW pump automatically started. Also the 4A or 4B 4KV bus ground alarm cleared. An initial inspection of the 4A ICW pump revealed that the overcurrent relays were tripped. The 4A ICW pump was declared out of service and Unit 4 was placed into a 24 hour limiting condition for operation (LCO) as per Technical Specification (TS) 3.4.5. An investigation revealed that the cause of the overcurrent trip was due to a ground on the pump motor. It was decided that in order to minimize the time on the LCO, the 4A ICW pump would be replaced with the spare ICW pump and a more detailed inspection of the pump that tripped could be done after replacement. The pump was replaced but the work had not been completed by the end of the 24 hour LCO. Unit 4 entered TS 3.0.1 which required the unit to be in hot standby within 7 hours. The pump replacement was completed and satisfactorily tested within this time frame without the necessity to initiate a unit shutdown.


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| FACILITY NAME (1) | DOCKET NUMBER (2) | LER NUMBER (6) | | | PAGE (3) |
|---|---|---|---|---|---|
| | | YEAR | SEQUENTIAL NUMBER | REVISION NUMBER | |
| Turkey Point Unit 4 | 0 5 0 0 0 2 5 1 | 8 7 | — 0 1 6 | — 0 0 | 0 2 OF 0 3 |

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

EVENT:

On July 15, 1987, while Unit 4 was at 90% power, an automatic actuation of the 4C intake cooling water (ICW) pump (EIIS:BI) occurred. At 0755 on July 15, 1987, an annuciator alarm (EIIS:IB) was received in the control room for 4 KV Bus 4A or 4B Ground (EIIS:EB). Operations personnel were directed to investigate the cause of the alarm. At 0758, the 4A ICW pump tripped and the 4C ICW pump automatically started. Also the 4A or 4B 4KV bus ground alarm cleared. An initial inspection of the 4A ICW pump revealed that the overcurrent relays were tripped. The 4A ICW pump was declared out of service as of 0758 and Unit 4 was placed into a 24 hour limiting condition for operation (LCO) as per Technical Specification (TS) 3.4.5. An investigation revealed that the cause of the overcurrent trip was due to a ground on the pump motor. Therefore, it was decided to replace the 4A ICW pump with the spare ICW pump and a more detailed inspection of the pump that tripped could be done after replacement. This was done to expedite repairs to minimize LCO time.

At 2115 on July 15, 1987, a shutdown of Unit 4 was commenced due to exceeding the chemistry limits for the three steam generators (EIIS:AB) on Unit 4. At 0758 on July 16, 1987, the 24 hour LCO was exceeded for the 4A ICW pump, which placed Unit 4 into TS 3.0.1 requiring the unit to be in hot standby (mode 3) within the next 7 hours. At this time Unit 4 was in mode 2 (start up). Efforts to return the 4A ICW pump to service were continued. At 1335 the 4A ICW pump was satisfactorily tested in accordance with operating procedure (OP) 3404.2, Intake Cooling Water System - Periodic Test of Pumps, and placed back in service. This took Unit 4 out of TS 3.0.1. Unit 4 was in the LCO for the ICW pump for 29 hours and 37 minutes.

CAUSE OF EVENT:

The affected motor was sent to a qualified manufacturer to inspect the motor and identify root cause. The inspection determined that a ground on the motor caused the overcurrent condition but the cause of the ground could not be determined.

ANALYSIS OF EVENT:

Upon receipt of the automatic signal, the 4C ICW pump started as designed. The 4A ICW pump was declared out of service and a 24 hour LCO was entered as required by TS. During this event the 4B and 4C ICW pumps remained operable and capable of performing their intended functions. The Final Safety Analysis Report (FSAR) section 9.6 states that 3 ICW pumps are provided for each unit. Two pumps are required under normal operation. However, only one pump is required following a design basis accident. The 3 pumps are connected to two separate 4160 volt buses. Any one of the three pumps can be started on emergency diesel generator power in the event of a complete loss of power. Also the B emergency diesel generator remained operable thus ensuring an operable onsite supply of emergency power for the operable pumps. Based on the above, the health and safety of the public were not affected.

| FACILITY NAME (1) | DOCKET NUMBER (2) | LER NUMBER (6) | | | PAGE (3) |
|---|---|---|---|---|---|
| | | YEAR | SEQUENTIAL NUMBER | REVISION NUMBER | |
| Turkey Point Unit 4 | 0 5 0 0 0 2 5 1 | 8 7 | — 0 1 6 | — 0 0 | 0 3 OF 0 3 |

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

CORRECTIVE ACTIONS:

1) The 4A ICW pump was replaced with the spare ICW pump, satisfactorily tested and returned to service.

2) The affected motor was sent to a qualified manufacturer for inspection and repairs. The motor wiring was rewound and the bearings were replaced.

ADDITIONAL DETAILS:

The ICW pump is a type 33CMC manufactured by the Johnston Pump Company. The ICW pump motor is a model WPX Frame 589PYO manufactured by the Louis Allis Company.

Similar Occurrences: LERs 251-87-004 and 250-86-024

P. O. B[redacted]4000, JUNO BEACH, FL 33408

FLORIDA POWER & LIGHT COMPANY

AUGUST 1 4 1987

L-87-333
10 CFR 50.73

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

Gentlemen:

Re: Turkey Point Unit 4
Docket No. 50-251
Reportable Event: 87-16
Date of Event: July 15, 1987
Engineered Safety Features Actuation: Automatic Start of the 4C Intake Cooling Water Pump When 4A ICW Pump Tripped on Overcurrent Due to Ground on Pump Motor

The attached Licensee Event Report is being submitted pursuant to the requirements of 10 CFR 50.73 to provide notification of the subject event.

Very truly yours,

C. O. Woody
Group Vice President
Nuclear Energy

COW/SDF/gp

Attachment

cc: Dr. J. Nelson Grace, Regional Administrator, Region II, USNRC
Senior Resident Inspector, USNRC, Turkey Point Plant

IE22
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