

ACCELERATED DISTRIBUTION DEMONSTRATION SYSTEM

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 9203090195 DOC. DATE: 92/03/02 NOTARIZED: NO DOCKET #
 FACIL: 50-251 Turkey Point Plant, Unit 4, Florida Power and Light C 05000251
 AUTH. NAME AUTHOR AFFILIATION
 HANEK, O.I. Florida Power & Light Co.
 PLUNKETT, T.F. Florida Power & Light Co.
 RECIP. NAME RECIPIENT AFFILIATION

SUBJECT: LER 92-001-00: on 920202, discovered that rod cluster control indicators not in agreement w/demand indication. Caused by temp variation in indications inherent to sys design. In-core flux maps performed & indications adjusted. W/920302 ltr.

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NOTES: NRR RAGHAVAN, L

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| | NRR/DST/SRXB 8E | 1 1 | REG-FILE 02 | 1 1 |
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| EXTERNAL: | EG&G BRYCE, J.H | 3 3 | L ST LOBBY WARD | 1 1 |
| | NRC PDR | 1 1 | NSIC MURPHY, G.A | 1 1 |
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L-92-51
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: 92-001-00
Date of Event: February 2, 1992
Technical Specification 3.0.3 Entry - Malfunction of
Rod Cluster Control Position Indication

The attached Licensee Event Report is being provided, pursuant to the requirements of 10 CFR 50.73, to provide information on the subject event.

Very truly yours,

TF Plunkett by O.W. Rane

T. F. Plunkett
Vice President
Turkey Point Nuclear

TFP/OIH

Attachment

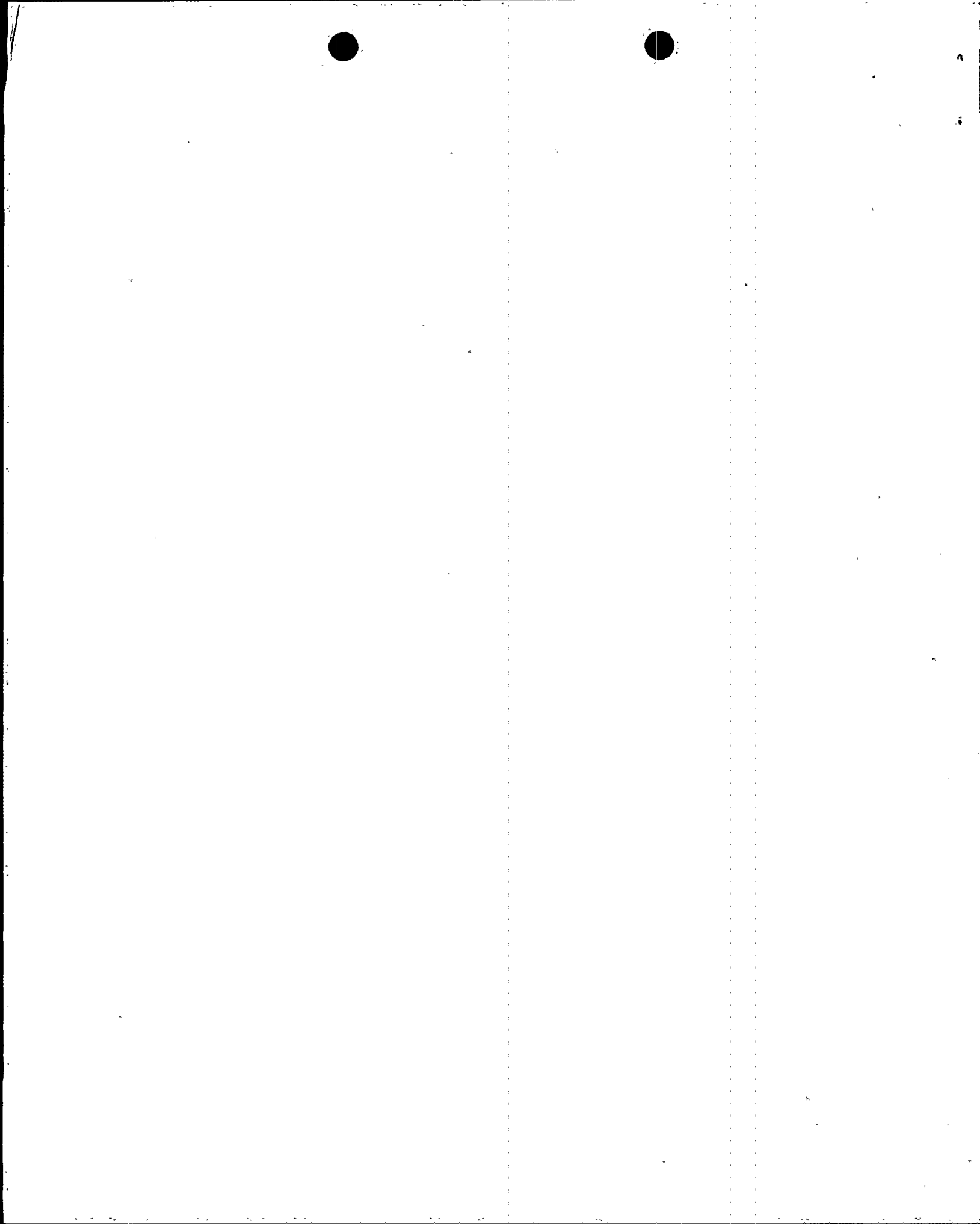
cc: Stewart D. Ebnetter, Regional Administrator, Region II, USNRC
R. C. Butcher, Senior Resident Inspector, USNRC, Turkey Point
Plant

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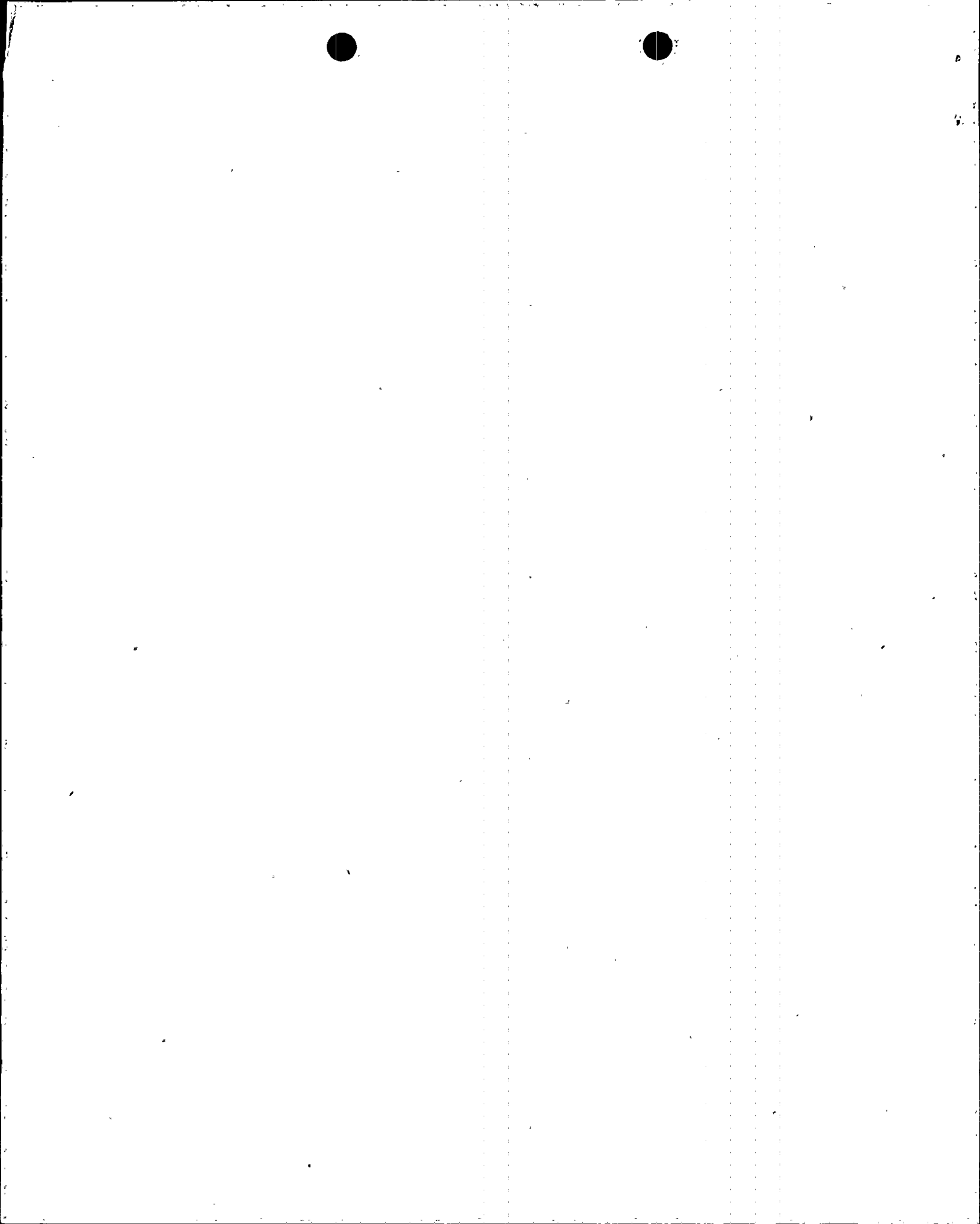
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LICENSEE EVENT REPORT (LER)

| | | | | | | | | | | | | | |
|---|---|-----------|--------------|--|-------|-------|-------------------------------|-----------|--------------|---|------|---------------------------|--------------|
| FACILITY NAME (1) TURKEY POINT UNIT 4 | | | | | | | | | | DOCKET NUMBER (2) 05000251 | | PAGE (3) 1 OF 3 | |
| TITLE (4) TECHNICAL SPECIFICATION 3.0.3 ENTRY - ROD CLUSTER CONTROL POSITION INDICATORS NOT IN AGREEMENT WITH DEMAND INDICATION | | | | | | | | | | | | | |
| EVENT DATE (5) | | | | LER NUMBER (6) | | | RPT DATE (7) | | | OTHER FACILITIES INV. (8) | | | |
| MON | DAY | YR | | YR | SEQ # | R# | MON | DAY | YR | | NAME | | DOCKET # (S) |
| 02 | 02 | 92 | | 92 | 001 | 00 | 03 | 02 | 92 | | | | |
| OPERATING MODE (2) | | | 2 | <div style="margin-bottom: 5px;">10 CFR 50.73(a)</div> <div style="font-size: small;">(Specify in Abstract below and in text)</div> | | | | | | | | | |
| POWER LEVEL (10) | | | | <div style="margin-bottom: 5px;">< 3%</div> | | | | | | | | | |
| LICENSEE CONTACT FOR THIS LER (12) | | | | | | | | | | | | | |
| Olga I. Hanek, Licensing Engineer | | | | | | | | | | TELEPHONE NUMBER 305-246-6607 | | | |
| COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13) | | | | | | | | | | | | | |
| CAUSE | SYSTEM | COMPONENT | MANUFACTURER | NPRDS | | CAUSE | SYSTEM | COMPONENT | MANUFACTURER | NPRDS | | | |
| | | | | | | | | | | | | | |
| SUPPLEMENTAL REPORT EXPECTED (14) | | | | | | | EXPECTED SUBMISSION DATE (15) | | MONTH | DAY | YEAR | | |
| Y | (if yes, complete EXPECTED SUBMISSION DATE) | | | | | NO | | | | | | | |
| E | | | | | | X | | | | | | | |
| S | | | | | | | | | | | | | |
| ABSTRACT (16) | | | | | | | | | | | | | |
| <p>At approximately 1540, on February 2, 1992, with Turkey Point Unit 4 in Mode 3 and reactor coolant temperature at 547 degrees F, while pulling rods during Unit 4 reactor startup, rods J-11 and L-7 in Control Bank A and rod H-6 in Shutdown Bank B indicated greater than 12 steps difference from the group step counters. The reactor went critical at 1600. After waiting the 1 hour soak period, as allowed by Technical Specification 3.1.3.2, the rods still indicated misalignment. Technical Specification 3.0.3 was entered at 1640 due to more than one Rod Position Indication (RPI) being out of service on a control bank (Control Bank A) as specified by Technical Specification 3.1.3.2. Incore Flux Maps determined all rods to be aligned properly. The RPIs were adjusted to indicate the rod positions properly and Technical Specification 3.0.3 for rods J-11 and L-7 was exited at 1725. At 1736, the RPI for rod H-6 was adjusted to indicate properly in accordance with Technical Specification 3.1.3.2. Technical Specification 3.1.3.2 action statement was exited at 1736.</p> | | | | | | | | | | | | | |



LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

| | | | |
|---------------------|---------------|------------|----------|
| FACILITY NAME | DOCKET NUMBER | LER NUMBER | PAGE NO. |
| TURKEY POINT UNIT 4 | 05000251 | 92-001-00 | 02 OF 03 |

I. DESCRIPTION OF THE EVENT

At 1540, on February 2, 1992, Turkey Point Unit 4 was in Mode 3 with reactor coolant temperature at 547 °F. While pulling rods during Unit 4 reactor startup, the Rod Position Indication (RPI) System indication for rods J-11 and L-7 in Control Bank A and rod H-6 in Shutdown Bank B indicated greater than 12 steps difference from the group demand step counters.

Technical Specification 3.1.3.2, "Reactivity Control Systems, Position Indication Systems - Operating, Limiting Condition For Operation," states that the RPI System shall be operable and capable of determining the shutdown and control rod positions within ± 12 steps of the group demand counters for withdrawal ranges of 0 - 30 steps and 200 - 228 steps, within one hour after rod motion (allowing for thermal soak).

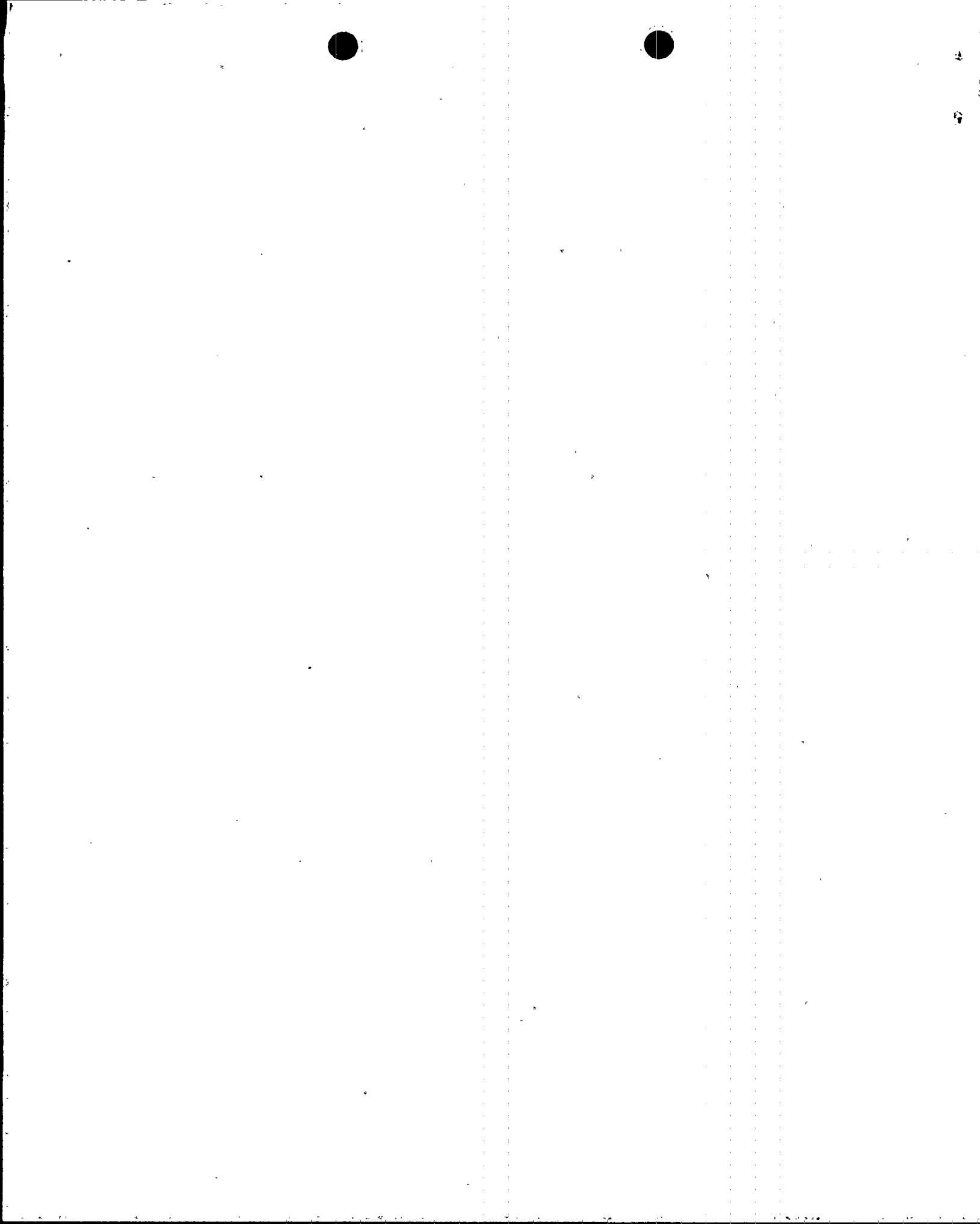
The reactor was declared critical at 1600. After waiting the 1 hour soak period as allowed by Technical Specification 3.1.3.2, rods J-11 and L-7 in Control Bank A still indicated a misalignment of greater than 12 steps with the control rod demand counter. Technical Specification 3.1.3.2, Action a. allows for a maximum of one analog RPI per bank to be inoperable. Therefore, Technical Specification 3.0.3 was entered at 1640. For one analog RPI per bank inoperable, (rod H-6 in Shutdown Bank B), Technical Specification 3.1.3.2, Action a. requires determination of the position of the apparently misaligned rods by use of incore movable detectors. At the time of the end of the one hour soak the rods were still missaligned as follows:

| <u>Rod</u> | <u>Bank</u> | <u>Demand Counter</u> | <u>RPI</u> |
|------------|-------------|-----------------------|------------|
| L-7 | Control A | 228 | 211 |
| J-11 | Control A | 228 | 215 |
| H-6 | Shutdown B | 228 | 215 |

Incore Flux Maps determined the Demand Counter indications to be correct at 228 steps and operable in accordance with Technical Specification 3.1.3.2. Therefore, in accordance with 4-PMI-028.3, "RPI Hot Calibration, CRDM Stepping Test and Rod Drop Test," the RPIs were adjusted to properly indicate the rod positions at 228 steps. Technical Specification 3.0.3 for rods J-11 and L-7 was exited at 1725. Technical Specification 3.1.3.2 action statement for rod H-6 was exited at 1736.

II. CAUSE OF THE EVENT

The root cause of this event is that rod position indication varies with temperature. This temperature variation was first identified at Turkey Point in 1972. In 1972 Westinghouse stated that temperature variations in indications are inherent to the design of the system. A special test was conducted at Turkey Point in 1975 to investigate the temperature dependent variations, but the results were inconclusive. Generally, the temperature dependent variation is corrected within the one hour thermal soak time allowed by Technical Specification 3.1.3.2.



LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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III. ANALYSIS OF THE EVENT

The operability of the RPIs is required to determine control rod positions and thereby ensure compliance with the control rod alignment and insertion limits. The requirements of Technical Specification 3.1.3.2 are intended to ensure that the potential effects of rod misalignment are bounded by the accident analyses. Incore flux maps determined all rods to be aligned properly. The RPIs were adjusted to indicate the rod positions properly, and Technical Specification 3.0.3 for rods J-11 and L-7 was exited at 1725. Technical Specification 3.1.3.2 action statement for rod H-6 was exited at 1736.

IV. CORRECTIVE ACTIONS

1. Incore Flux maps were performed and determined the rods to be aligned properly.
2. In accordance with 4-PMI-028.3, the RPIs were adjusted to indicate properly.
3. A task team will review the system design to investigate possible system improvements. If the results of the investigation identify a root cause different from the root cause discussed in Section II of this report, a supplement to the LER will be submitted.

V. ADDITIONAL INFORMATION

No similar LERs have been identified.

