NRC FORM 366
(7.77)

U. S. NUCLEAR REGULATORY COMMISSION

LICENSEE EVENT REPORT

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

01 | MDCCN2 (2) | 00-00000-00 (3) | 41111 (4) | (5)
LICENSEE CODE — LICENSE NUMBER — LICENSE TYPE — CAT

CON'T
01 | REPORT SOURCE L (6) | 05000318 (7) | 021282 (8) | 031282 (9)
DOCKET NUMBER — EVENT DATE — REPORT DATE

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

02 At 1000, following a reactor trip, it was discovered that CEA-19 had
03 stuck at the approximately 8" withdrawn position. Attempts to move the
04 CEA failed and it was declared inoperable (T.S. 3.1.3.1 & 3.1.3.4).
05 CEA-19 was freed and tested satisfactorily at 1557 on 2/13/82. All
06 other CEAs remained operable and adequate shutdown margin was maintained
07 throughout this event. No similar events have been reported.
08

09 SYSTEM CODE RB (11) | CAUSE CODE X (12) | CAUSE SUBCODE Z (13) | COMPONENT CODE CONROD (14) | COMP. SUBCODE Z (15) | VALVE SUBCODE Z (16)

(17) LER/RO REPORT NUMBER: EVENT YEAR 82 | — | SEQUENTIAL REPORT NO. 010 | / | OCCURRENCE CODE 03 | REPORT TYPE L | — | REVISION NO. 0

ACTION TAKEN X (18) | FUTURE ACTION X (19) | EFFECT ON PLANT Z (20) | SHUTDOWN METHOD Z (21) | HOURS (22) 0000 | ATTACHMENT SUBMITTED Y (23) | NPRD-4 FORM SUB. Y (24) | PRIME COMP. SUPPLIER N (25) | COMPONENT MANUFACTURER C490 (26)

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

10 The cause of this event is unknown. After plant cooldown CEA-19 was
11 freed using a manual sequencer versus the normal coil power programmer.
12 Subsequently using the normal coil power programmer CEA-19 was exercised
13 and drop tested satisfactorily per T.S. 4.1.3.4b. This report will be
14 updated following inspection of CEA-19 during the next refueling outage.

15 FACILITY STATUS G (28) | % POWER 000 (29) | OTHER STATUS (30) NA | METHOD OF DISCOVERY A (31) | DISCOVERY DESCRIPTION (32) Operator Observation

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

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

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

19 LOSS OF OR DAMAGE TO FACILITY: TYPE Z (42) | DESCRIPTION NA (43)

20 PUBLICITY: ISSUED N (44) | DESCRI

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NRC USE ONLY

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GPO 917-926

LER NO.	82-10/3L
DOCKET NO.	50-318
LICENSE NO.	DPR-69
EVENT DATE	02-12-82
REPORT DATE	03-12-82
ATTACHMENT	

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES

At approximately 1000, 2/12/82 a reactor trip ocurred. Subsequent to the trip, it was observed that CEA 19 was not fully inserted. CEA position via the reed switch system indicated that the CEA was at the approximately 8" withdrawn position. Attempts to move CEA 19 in or out using the normal coil power programmer were unsuccessful while in Hot Standby. CEA 19 was declared inoperable (T. S. 3.1.3.1 and 3.1.3.4). Coil current traces for CEDM 19 verified that the CEDM was operating normally and suggested that the drive train (either the CEA or its extension shaft) was stuck. While in Hot Standby an unsuccessful attempt was made to move CEA 19 in or out using a "manual sequencer" (provided by Combustion Engineering) in place of the normal coil power programmer. An unsuccessful attempt was made to free the CEA by stopping and starting the RCP with its discharge closest to the CEA position.

Cooldown was initiated and several attempts to move CEA 19 during the cooldown, using the normal coil power programmer, were still unsuccessful. With the RCS at 220-225°F, 270-280 psia, and two RCP's operating, another attempt was made to move CEA 19 using the "manual sequencer". This attempt was successful; the CEA was first withdrawn 3/4" from the stuck position and then moved to the 12" withdrawn position.

CEDM 19 was then switched to a dual coil power programmer module (with minimum pull down coil voltage) and withdrawn from and inserted to the 8" withdrawn position. The CEDM was unable to drive CEA 19 down through the 8" withdrawn position. An attempt to scram the CEA from the 8" withdrawn position was not successful. CEA 19 was withdrawn to 31" withdrawn position and successfully scrammed to full insertion as verified by the reed switch system. Additional scrams from various heights (up to the Upper Electrical Limit) were also successful in that the CEA inserted fully and was withdrawn successfully using the dual coil power programmer module with normal voltage to all coils. A normal drop time measurement was made at 1552, 2/13/82 with satisfactory results. CEDM/CEA 19 was exercised under the above cold conditions using the normal single coil power programmer module with normal voltage to all coils. A scram from the Lower Electrical Limit resulted in full insertion of the CEA. Operation in withdrawal, insertion, and scram modes in the region of previous hangup was normal. CEA 19 was declared operable at 1557 on 2/13/82. Throughout the period the CEA was inoperable, adequate shutdown margin was maintained. No similar events have been reported.

LER NO.	82-10/3L
DOCKET NO.	50-318
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REPORT DATE	0 3-12-82
ATTACHMENT	

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (CONT'D)

The cause of the event is unknown. The following corrective action measures have been or will be taken.

I. Unit 2 Initial Startup Test Program records have been reviewed to verify that the current CEA 19 drop time is consistent with times previously measured. Results of this review were satisfactory.

II. Combustion Engineering has performed a safety analysis of the event which revealed that should the event repeat itself a sufficient safety margin will exist through 11,000 MWD/T to accomodate the worst effected Design Basis Event. Aditionally, Combustion Engineering has evaluated the mechanical forces applied to the CEA and extension shaft during attempts to free the CEA and determined the forces were not sufficient to affect its integrity.

III. Subsequent to the event during plant heatup CEDM/CEA 19 was exercised over full travel including the buffer region of the CEA guide tube and normal operation was verified. CEDM/CEA 19 was drop time tested 3 times after plant heatup. In addition, all other CEAs in Group 2 were drop time tested to confirm that the event was not a precursor of similar behavior by other CEAs in the same bicentric region of the core. CEA 19's drop time was consistent with the drop times of all Group 2 CEAs, and all drop times were within Technical Specification limits.

IV. During the next refueling outage of Unit 2, CEA 19 and its corresponding fuel assembly guide tubes will be inspected for any evidence of a reason for the event. This report will be updated at that time.