(7-77)	LICENSEE EVENT REPORT UPDATE REPORT PREVIOUS REPORT DATE: 09-15-80
	CONTROL BLOCK PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION
0 1	M D C C N 2 0 0 - 0 0 0 C - 0 0 3 4 1 1 1 1 4 5 6 LICENSE CODE 14 15 LICENSE NUMBER 25 26 LICENSE TYPE 30 67 CAT 58
0 1 2 8	REPORT L 6 0 5 0 0 0 3 1 8 7 0 9 1 5 8 0 8 0 1 0 4 8 2 9 SOURCE 60 61 DOCKET NUMBER 68 68 69 EVENT DATE 74 75 REPORT DATE 80
0 .	During normal power operation, while performing preventive maintenance
0 3	procedure 81-1-0M, CEA #9 dropped into the core. Took corrective action
0 4	per T.S. 3.1.3.5.a and 3.1.3.1.f by lowering power level to less than
0 5	70% and by fully withdrawing the CEA. All other CEA's remained within
0 6	proper alignment limits. This event had no affect upon the public
0 7	health or safety. LER's 50-317/80-12 and 50-318/80-40 describe similar
0 8	occurrences.
, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	SYSTEM CAUSE CAUSE COMPONENT CODE COMP VALVE SUBCODE SUBCODE
7 .8	R B (1) X (12) X (13) M E C F U N (14) Z (15) Z (16) 9 10 11 12 13 13 DOCUMBENCE REPORT REVISION
	LER RO EVENT YEAR REPORT NO. CODE TYPE NO. NO.
	ACTION FUTURE ON PLANT SHUTDOWN HOURS 22 ATTACHMENT SUBMITTED FORM SUB. SUPPLIER SUPPLIER MANUFACTURER X 18 X 19 B 20 Z 21 0 0 0 1 Y 23 N 24 N 25 C 4 9 0 26 33 34 34 35 36 36 37 40 41 40 41 23 42 43 43
110	CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27) A possible cause is omission of CEA venting during primary system fill
	evolutions. Due to a lack of justification, CEA venting was discontin-
	ued by the end of the unit's first cycle. Venting is re-established in
	the fill routine as of entry into the fourth cycle. CEA drop rate has
	declined. The exact mechanism resulting in CEA drops is unidentified. 80 METHOD OF
1 5	E 28 O 7 8 29 NA B 31 Operator Observation 32 B 31 Operator Observation 32 ACTIVITY CONTENT
1 6	ELEASED OF RELEASE AMOUNT OF ACTIVITY (35) LOCATION OF RELEASE (36) NA NA 10 10 11 NA 15
FT 71	PERSONNEL EXPOSURES NUMBER TYPE DESCRIPTION (39) NA NA
114	9 PERSONNEL INJURIES 80
1 1	NUMBER DESCRIPTION (41) O O O (40) NA
2 6	2 11 12 EGSS OF DR DAMAGE TO FACILITY 43 TYPE DESCRIPTION 43
1 9	Z 42 NA 8201250231 820104 PDR ADDCK 05000318
2 0	PUBLICITY ISSUED DESCRIPTION 45 NA PDR ADDCK 05000518 NRC USE ONLY NA
7 8	NAME OF PREPARER R.L. Wenderlich/P.G. Rizzo PHONE (301) 269-4776/4786 0
	171016

LER NO. 81-41/3X
DOCKET NO. 50-318
LICENSE NO. DPR-69
EVENT DATE 09-15-80
REPORT DATE 01-04-82
ATTA.CHMENT

CAUSE AND BACKGROUND

An apparent cause of some previously unexplained Control Element Assembly (CEA) drop events is omission of Control Element Drive Mechanism (CEDM) venting during primary system fill evolutions. The NSSS vendor initially recommended that each CEDM be vented after any outage requiring the primary system to be drained to below the tops of the CEDMs. The purpose of venting CEDMs during the refill of the system was explained to be to wet moving metal parts for lubrication.

Several CEDM venting evolutions were performed during each of the Unit I and Unit 2 plant startup test programs. This experience was marked by deficiencies of the venting rigs and fittings (later corrected), delays in each startup due to the length of time of the evolution and realization that personnel were exposed to significant radiation doses during venting.

Plant engineers, during analysis of venting problems, performed calculations which showed that, once fully drained, the free volume of the CEDM internals is nearly filled when the primary system is refilled without venting, then pressurized. Compression of entrapped non-condensables results in primary coolant reaching to approximately one foot from the top of the CEDMs, a level well above the CEDMs moving parts. Plant staff decided, during the first fuel cycle of Unit 2, to forego CEDM venting during succeeding system fill evolutions.

The NSSS vendor agreed with the results of the free-volume calculations, but maintained the recommendation to vent CEDMs for the reason previously stated. An additional vendor concern for the prevention of loose corrosion material formation has proven unnecessary. No evidence of significant loose corrosion product material has been detected in the CEDMs to date.

During Unit 2 Fuel Cycle One, a high rate of CEA drops due to control power electrical failures were experienced. These failures decreased during Fuel Cycle Two after electrical modifications. During this period, however, unexplained CEA drop events gradually increased in frequency in both Unit I and 2.

In late 1980 a review of CEA drop events was begun in order to detect similarities in occurrence which would lead to identification of a cause for these unexplained events. Although most of these events occurred during rod movement, no electrical nor mechanical sign of a fault has been evidenced during subsequent testing. The data gathered during the review shows no other common factor. This review was completed in 1981 with no conclusions.

ACTION AND RESULT

During the startup of Unit 2 at the commencement of the Fourth Fuel Cycle, all Unit 2 CEDMs were vented. A sharp decrease in unexplained CEA drop events has been the apparent result. From a previous average rate of nearly one drop per month, Unit 2 has experienced one unexplained CEA drop since March, 1981. Unit 1 has experienced two unexplained drops in 1981, following CEDM venting at commencement of its current Fifth Fuel Cycle in January, 1981.

FUTURE ACTION

CEDMs will continue to be vented during primary system fill operations following draining to below the bottom of the pressurizer. This will be done although the effect of such venting on the mechanism's operation has not been defined. The plant staff has continued to share information on these events with the NSSS supplier.