

## LICENSEE EVENT REPORT

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

0	1	0	H	D	B	S	1	2	0	0	-	0	0	0	0	-	0	0	3	4	1	1	1	1	4	5
7	8	9	LICENSEE CODE						14	15	LICENSE NUMBER						25	26	LICENSE TYPE				30	57	CAT	58

0	1	L	6	0	5	0	0	0	3	4	6	7	0	6	2	5	8	1	8	0	7	2	4	8	1	9
7	8	REPORT SOURCE		60	61	DOCKET NUMBER						68	69	EVENT DATE				74	75	REPORT DATE				80		

## EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

(NP-33-81-45) On 6/25/81 during a routine recovery following a reactor trip, a control room operator discovered that control rod (CR) 5-8 was not moving while withdrawing group 5. CR 5-8 was declared inoperable at 0530 hours, placing the unit in action statement (a) of T.S. 3.1.3.1. There was no danger to the health and safety of the public or station personnel. The unit was in the hot standby mode at the time of the event, and the existence of an adequate shutdown margin was verified.

0	9	R	B	E	B	C	R	D	R	V	E	Z	Z	8	1	0	3	8	0	3	L	0	0	1	5																																																
7	8	SYSTEM CODE		9	10	CAUSE CODE		11	CAUSE SUBCODE		12	COMPONENT CODE				13	COMP. SUBCODE		19	VALVE SUBCODE		20	EVENT YEAR		21	22	SEQUENTIAL REPORT NO.		23	OCCURRENCE CODE		28	29	REPORT TYPE		30	31	REVISION NO.		32	ACTION TAKEN		33	FUTURE ACTION		34	EFFECT ON PLANT		35	SHUTDOWN METHOD		36	HOURS		37	38	39	40	ATTACHMENT SUBMITTED		41	NPRD-4 FORM SUB.		42	PRIME COMP. SUPPLIER		43	COMPONENT MANUFACTURER		44	45	46	47

## CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

The cause was a component failure. The leaf spring anti-rotational device of the leadscrew nut assembly had fractured into several fragments, consequently, preventing the leadscrew from rising. The leadscrew nut assembly was replaced, and all fragments were retrieved. CR 5-8 was declared operable on 7/17/81 at 1020 hours.

1	5	D	0	0	0	0	NA	A	Control room operator observation																																	
7	8	FACILITY STATUS		9	% POWER		10	OTHER STATUS		30	METHOD OF DISCOVERY		31	DISCOVERY DESCRIPTION				32																								
1	6	Z	0	0	0	0	NA	NA	NA	NA	LOCATION OF RELEASE				36																											
7	8	ACTIVITY CONTENT RELEASED OF RELEASE		9	AMOUNT OF ACTIVITY		35	PERSONNEL EXPOSURES				37	PERSONNEL INJURIES		38	LOSS OF OR DAMAGE TO FACILITY		39	PUBLICITY		40	ISSUED DESCRIPTION		41	NAME OF PREPARER		42	PDR		43	PDR		44	PDR		45	PDR		46	PDR		47

TOLEDO EDISON COMPANY  
DAVIS-BESSE NUCLEAR POWER STATION UNIT ONE  
SUPPLEMENTAL INFORMATION FOR LER NP-33-81-45

DATE OF EVENT: June 25, 1981

FACILITY: Davis-Besse Unit 1

IDENTIFICATION OF OCCURRENCE: Inability to withdraw control rod 5-8 following reactor trip

Conditions Prior to Occurrence: The unit was in Mode 3 with Power (MWT) = 0 and Load (Gross MWE) = 0

Description of Occurrence: During a routine recovery following a reactor trip, the Control Room operator discovered that control rod 5-8 was not moving while withdrawing group 5. Several attempts were made to latch and withdraw control rod 5-8 but the rod remained in the fully inserted position. Control rod 5-8 was declared inoperable at 0530 hours on June 25, 1981, which placed the unit in action item "a" of Technical Specification 3.1.3.1. Action item "a" requires that the shutdown margin requirement of Technical Specification 3.1.1.1 be satisfied, and that the unit be placed in hot standby within the next six hours. Both required actions were complied with.

Designation of Apparent Cause of Occurrence: The apparent cause of this occurrence was a component failure. The leaf spring anti-rotational device of the leadscrew nut assembly had fractured into several fragments, some of which lodged between the buffer spring assembly and the lead screw, which prevented the leadscrew from rising. No evidence was revealed to indicate the reason for the component failure.

Analysis of Occurrence: There was no danger to the health and safety of the public or to station personnel. The unit was in the hot standby mode at the time of the event, and the existence of an adequate shutdown margin was verified. This fulfilled the action requirements of Technical Specification 3.1.3.1.

A detailed engineering evaluation will be conducted to determine the reason for the leaf spring failure. Based on prior operating experience with control rod drive mechanisms during which no leaf spring failures have been reported, Babcock and Wilcox feel that there is a low probability of a similar event occurring.

Corrective Action: With the reactor plant cooled down, depressurized, and drained to support maintenance, a drive line check was performed on the C-7 control rod drive mechanism which normally operates control rod 5-8. The drive line check was conducted under Maintenance Work Order (MWO) 81-2676 to determine whether the binding problem was occurring in the core or in the drive mechanism. It was determined that the leadscrew was stuck since it could not be withdrawn while uncoupled from the control rod assembly. The C-7 control rod drive mechanism was removed under MWO 81-2717

and disassembled under MWO 81-2726. During disassembly, it was discovered that the leaf spring anti-rotational device of the leadscrew nut assembly had fractured into several fragments, some of which lodged between the buffer spring assembly and the leadscrew, which prevented the leadscrew from rising. The leadscrew nut assembly was replaced during reassembly, and a new torque tube assembly minus the torque taker assembly, was installed due to damage sustained during disassembly when the snubber guide galled on the torque tube. All fragments from the broken leadscrew nut assembly were retrieved. The C-7 control rod drive mechanism was reassembled under MWO 81-2726 and reinstalled under MWO 81-2725. The drive line check was again performed on July 8, 1981 which demonstrated freedom of movement of the control rod assembly by raising the leadscrew and associated control rod assembly two inches with a hoist and spring scale. The control rod program verification was satisfactorily performed per Surveillance Test ST 5013.03 on July 15, 1981 and plant heatup commenced. Surveillance Test ST 5013.02, Control Rod Insertion Time Test, was performed and at 1020 hours on July 17, 1981, control rod 5-8 was declared operable, which removed the unit from Technical Specification 3.1.3.1, action item "a".

Failure Data: There have been no similar occurrences.