

LICENSEE EVENT REPORT

CONTROL BLOCK:

(PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

LICENSEE CODE **LICENSE NUMBER** **LICENSE TYPE** **CAT 58**

CON'T

REPORT

DOCKET NUMBER 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

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At 0200 on 12/7/78, Containment Post-Accident Radiation Monitor RE 5030 was declared

inoperable. The unit was placed in the Action Statement of T.S. 3.3.3.6. At 0315,

RE 5029 was declared inoperable and the unit was placed in the Action Statement of T.S.

3.4.6.1 and 3.3.3.1. At 0500 the unit was in Hot Standby. At 2045 RE 5030 was declared

operable and the unit was removed from Action Statements of T.S. 3.4.6.1 and 3.3.3.1.

On 12/11/78, RE 5029 was restarted at 0935 and again failed at 1135. At 1225 RE 5029

was operable and the unit was removed from Action Statement of T.S. 3.3.3.6. (NP-33-78-

(NP-33-78-143)

SYSTEM CODE 3 B		CAUSE CODE B	CAUSE SUBCODE A	COMPONENT CODE M O T O R X				COMP. SUBCODE Z	VALVE SUBCODE Z
EVENT YEAR 7 8			SEQUENTIAL REPORT NO. 1 2 0	OCCURRENCE CODE 0 3		REPORT TYPE L	REVISION NO. —		
ACTION TAKEN A	FUTURE ACTION F	EFFECT ON PLANT A	SHUTDOWN METHOD A	HOURS 0 0 1 8	ATTACHMENT SUBMITTED Y	NPRD-4 FORM SUB. Y	PRIME COMP. SUPPLIER A	COMPONENT MANUFACTURER Z 1 6 5	

33 34 35 36

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)
On 12/7/78, RE 5029 and RE 5030 failed due to design error. Ambient temperatures ex-

ceeding design limits caused decomposition of the pump motor bearing grease, resulting

in bearing seizure. On 12/11/78, RE 5029 failed due to component failure of the pump.

A meeting with the vendor resulted in a Facility Change Request to reduce the motor

speed. Further corrective action will be recommended after analysis of failures is made.

7 8 9
FACILITY STATUS (28) E 1 5
% POWER 0 9 0 (29) NA
OTHER STATUS (30)
METHOD OF DISCOVERY (31) A Operator Observation
DISCOVERY DESCRIPTION (32)
ACTIVITY CONTENT
RELEASED OF RELEASE (33) Z 1 6
AMOUNT OF ACTIVITY (35) NA
LOCATION OF RELEASE (36)
PERSONNEL EXPOSURES
NUMBER TYPE DESCRIPTION (39) 0 0 0 (37) Z (38) NA
PERSONNEL INJURIES
NUMBER DESCRIPTION (41) 0 0 0 (40) NA
LOSS OF OR DAMAGE TO FACILITY
TYPE DESCRIPTION (43) Z (42) NA
PUBLICITY
ISSUED DESCRIPTION (45) N (44) NA
7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100
7901090213.
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DVR 78-184

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917-926

TOLEDO EDISON COMPANY
DAVIS-BESSE NUCLEAR POWER STATION UNIT ONE
SUPPLEMENTAL INFORMATION FOR LER NP-33-78-143

DATE OF EVENT: December 7, 1978 and December 11, 1978

FACILITY: Davis-Besse Unit 1

IDENTIFICATION OF OCCURRENCE: Containment Post Accident Radiation Monitors RE 5029 and RE 5030 were inoperable.

Conditions Prior to Occurrence: On December 7, 1978 at 0200 hours and at 0315 hours, the unit was in Mode 1, with Power (MWT) = 2495, and Load (MWE) = 823. On December 11, 1978 at 1135 hours, the unit was in Mode 1, with Power (MWT) = approximately 2550 and Load (MWE) = approximately 833.

Description of Occurrence: At 0200 hours on December 7, 1978, Containment Post-Accident Radiation Monitor RE 5030 was declared inoperable. The unit was placed in the Action Statement of Technical Specification 3.3.3.6. Technical Specification 3.3.3.6 requires post-accident monitoring instrumentation channels to be operable in Modes 1, 2, or 3. The Action Statement requires the inoperable instrument to be restored within 30 days or the unit must be placed in Hot Shutdown (Mode 3) within the next 12 hours.

At 0200 hours on December 7, the pump on RE 5029, the other Containment Post-Accident Radiation Monitor, was started. At 0230 hours, the pump stopped. RE 5029 was declared inoperable at 0315 hours. The unit was placed in the Action Statement of Technical Specification 3.4.6.1 and also Action Statement 14 of Technical Specification 3.3.3.1. Technical Specification 3.4.6.1 requires the operability of containment atmospheric particulate and gaseous radioactivity as well as containment sump and flow monitoring systems in Modes 1, 2, 3 and 4. Technical Specification 3.3.3.1 requires the operability of containment gaseous and particulate leakage detection channels in Modes 1, 2, 3, and 4.

With the inoperability of both RE 5029 and RE 5030, containment atmosphere particulate and gaseous radioactivity monitoring systems and leakage detection systems were inoperable. The applicable Action Statement states that the unit must be in Hot Standby (Mode 3) within the next six hours and in Cold Shutdown (Mode 5) within the following 30 hours. The unit commenced shutdown at 0330 hours and was in Mode 3 at 0500 hours on December 7, 1978, in compliance with the Action Statement. At 2045 hours, RE 5030 was declared operational, and the unit was removed from the Action Statements of Technical Specifications 3.4.6.1 and 3.3.3.1.

On December 10, 1978, at 1145 hours, RE 5029 was declared operable, removing the unit from the Action Statement of Technical Specification 3.3.3.6. On December 11, 1978 at 0935 hours, the pump on RE 5029 was started, but at 1135 hours, the pump failed, again placing the unit in the Action Statement of Technical Specification 3.3.3.6.

Designation of Apparent Cause of Occurrence: The cause of the failure of RE 5029 and RE 5030 on December 7 is attributed to component failure due to design error. Ambient temperatures exceeding design limits caused changes in bearing grease composition which led to bearing seizure in the pump motor.

The cause of the failure of RE 5029 on December 11 was due to component failure of the pump due to pump bearing seizure.

Analysis of Occurrence: There was no danger to the health and safety of the public or to unit personnel. Grab samples were obtained and analyzed during the period that RE 5029 and RE 5030 were both inoperable. No incident requiring the use of these instruments occurred during this time.

On December 7, 1978, the motor for RE 5030 was replaced under Maintenance Work Order 78-2856. During the replacement of the motor on RE 5030, it was discovered that a 2 HP motor that was not in accordance with specifications was installed. It was replaced with a 1½ HP motor of the proper specifications. The pump was rebuilt and re-installed. The installation of a 2 HP motor is being investigated at this time.

Corrective Action: After performance of Surveillance Test ST 5032.01, "Monthly Functional Test of the Radiation Monitoring System", RE 5030 was declared operable at 2045 hours. The unit was removed from the Action Statements of Technical Specifications 3.4.6.1 and 3.3.3.1.

On December 7-10, 1978, under Maintenance Work Order 78-2855, the motor on RE 5029 was replaced and a rebuilt pump installed. On December 10, 1978 at 1145 hours, after performance of ST 5032.01, RE 5029 was declared operable, removing the unit from the Action Statement of Technical Specification 3.3.3.6. On December 11, at 0935 hours, the pump on RE 5029 was started and shortly thereafter the pump failed again, placing the unit in the Action Statement of Technical Specification 3.3.3.6. At 1225 hours, after replacement with a rebuilt pump, the pump was restarted and the unit was removed from the Action Statement of Technical Specification 3.3.3.6.

On December 8, 1978, a meeting was held between Victoreen Company (radiation monitor vendor) and Toledo Edison representatives regarding all past radiation detector problems and failures. As a result of this meeting, Facility Change Request (FCR) 78-521 has been generated. This requests that the speed of the pumps on RE 5029 and RE 5030 be reduced, thereby reducing sample volume flow rate. Reduced pump speed would reduce required horsepower and current drawn by the monitors and decrease pump wear and internal heating.

Other FCRs have been issued: FCR 78-159 has been issued to the station for implementation. This change request will result in the inboard and outboard pump motor bearings being replaced with sealed bearings. FCR 78-299 requested the installation of a cooling system for RE 5029 and RE 5030. FCR 78-384 requested an engineering evaluation of motor-related problems on radiation monitors. Further corrective action will be recommended by the Power Engineering Department when the analysis of the mode of failures is completed.

Failure Data: This is a repetitive occurrence. Previously reported occurrences of component failure due to high ambient temperature, pump motor, or bearing seizure problems were reported in Licensee Event Reports NP-33-78-30, NP-33-78-45, NP-33-78-54, NP-33-78-77, NP-33-78-105, NP-33-78-111, NP-33-78-115, and NP-33-78-127.

LER #78-120