NRC FORM 366 (7-77)

U. S. NUCLEAR REGULATORY COMMISSION

LICENSEE EVENT REPORT

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

01 | LICENSEE CODE: O H D B S 1 (2) | LICENSE NUMBER: Ø Ø - Ø Ø Ø Ø Ø - Ø Ø (3) | LICENSE TYPE: 4 1 1 1 1 (4) | CAT (5)

CON'T 01 | REPORT SOURCE: L (6) | DOCKET NUMBER: Ø 5 Ø Ø Ø 3 4 6 (7) | EVENT DATE: Ø 4 2 1 8 3 (8) | REPORT DATE: 0 2 1 9 8 5 (9)

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

02 (NP-33-83-26) On 4/21/83 and again on 4/27/83, the Station experienced a trip of
03 Steam and Feedwater Rupture Control System (SFRCS) Channel 3. In the first occur-
04 rence, SFRCS Channel 1 was in test at the time which resulted in a full SFRCS trip
05 on Actuation Channel 1. The Station entered the action statement of Technical Speci-
06 fication 3.3.2.2. There was no danger to the health and safety of the public or
07 Station personnel. The water addition caused a minimal increase in OTSG level.
08 The actuation did not result in a reactor trip.

09 | SYSTEM CODE: C C (11) | CAUSE CODE: E (12) | CAUSE SUBCODE: Z (13) | COMPONENT CODE: I N S T R U (14) | COMP. SUBCODE: P (15) | VALVE SUBCODE: Z (16)

(17) LER/RO REPORT NUMBER | EVENT YEAR: 8 3 | — | SEQUENTIAL REPORT NO.: Ø 1 9 | / | OCCURRENCE CODE: Ø 3 | REPORT TYPE: X | — | REVISION NO.: 1

ACTION TAKEN: C (18) | FUTURE ACTION: B (19) | EFFECT ON PLANT: Z (20) | SHUTDOWN METHOD: Z (21) | HOURS (22): Ø Ø Ø Ø | ATTACHMENT SUBMITTED: Y (23) | NPRD-4 FORM SUB.: Y (24) | PRIME COMP. SUPPLIER: N (25) | COMPONENT MANUFACTURER: S 2 5 7 (26)

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

10 The cause of the trip was a failed +15 VDC power supply in Channel 3. The failed
11 component in the power supply is not known. Under Maintenance Work Orders 83-2566
12 and 83-2985, the failed supplies were replaced. SFRCS Channel 3 was declared opera-
13 ble at 1545 hours on 4/21/83 and at 1450 hours on 4/28/83, respectively.
14

15 | FACILITY STATUS: E (28) | % POWER: Ø 9 7 (29) | OTHER STATUS (30): NA | METHOD OF DISCOVERY: B (31) | DISCOVERY DESCRIPTION (32): Surveillance Test ST 5031.15

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

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

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

8503070182 850219
PDR ADOCK 05000346
S PDR

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

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PUBLICITY
20 | ISSUED: N (44) | DESCRIPTION (45): NA | NRC USE ONLY

DVRs 83-044 & 83-045

NAME OF PREPARER: Kent Yarger/Jan Stotz PHONE: 419-259-5000, Ext. 237/372

GPO 917-926

TOLEDO EDISON COMPANY
DAVIS-BESSE NUCLEAR POWER STATION UNIT ONE
SUPPLEMENTAL INFORMATION FOR LER NP-33-83-26

DATE OF EVENT: April 21, 1983 and April 27, 1983

FACILITY: Davis-Besse Unit 1

IDENTIFICATION OF OCCURRENCE: Steam and Feedwater Rupture Control System (SFRCS) power supply loss, Channel 3

Conditions Prior to Occurrence: The unit was in Mode 1, with Power (MWT) = 2744 and Load (Gross MWE) = 919.

Description of Occurrence: On April 21, 1983 at 0915 hours, Instrument and Control (I&C) personnel were performing Section 6.5 of the SFRCS Monthly Test ST 5031.15 which was simulating a loss of all four Reactor Coolant Pumps (RCPs) to SFRCS Channel 1. While in this condition the +15 VDC power supply failed in SFRCS Channel 3 which caused a full trip of Actuation Channel 1 for a loss of all four RCPs. This actuation level does not result in steam generator isolation but starts the applicable auxiliary feedwater pump in order to establish a high steam generator level to promote natural circulation. Indications are that some water was pumped to Steam Generator (SG) 1-1 from the Auxiliary Feed Pump (AFP). The SG 1-1 operate range level indicated a 1% increase although no steam header pressure or MWe spike was observed. This actuation did not result in a reactor trip. With Channel 1 tripped from the simulated loss of four RCPs and with Channel 3 power supply failed, SFRCS would not have been able to close AF608, an isolation to OTSG 1-1, in the event of a low main steam line 1-1 pressure trip. Therefore, the station was in the action statement of Technical Specification 3.3.2.2 since the minimum channels operable requirement was not being met.

On April 27, 1983, at 0205 hours, the station received an SFRCS Actuation Channel 1 half trip. SFRCS Channel 3 +15 VDC power supply was found to be de-energized. It was reset, and the trip condition cleared. Maintenance replaced the power supply. Again, the station entered the action statement of Technical Specification 3.3.2.2.

Designation of Apparent Cause of Occurrence: In both cases, SFRCS Channel 3 tripped due to a failed +15 VDC power supply. The exact component that failed in the supply is not known.

Analysis of Occurrence: There was no danger to the health and safety of the public or station personnel. In the first incident water was added to the Once Through Steam Generator (OTSG) 1-1 via AFP 1-1 and did cause a minimal increase in level; it did not cause an upset in plant operations or a reduction in generated MWe.

Corrective Action: After the failure on April 21, 1983, the fuse for the power supply was removed, inspected, and placed back in service. SFRCS Actuation Channel 1 was reset. Testing of SFRCS Channel 1 (which had started before the Channel 3 failure) was completed, and Channel 1 was returned to service. At 1430 hours under Maintenance Work Order (MWO) 83-2566, Channel 3 was taken out of service, and the power supply was replaced. At 1545 hours, Channel 3 was declared operable by the performance of Surveillance Test ST 5099.01. The Instrument and Control section did check for DC ripple in the power feed to the power supply and found it to be within specifications.

After the Channel 3 began tripping again on April 27, 1983, MWO 83-2985 was issued to replace the power supply a second time. At 1015 hours on April 28, 1983, SFRCS Channel 3 was taken out of service and the +15 VDC power supply was replaced. At 1450 hours, SFRCS Channel 3 was declared operable.

Failure Data: These were the first two failures of the +15 VDC power supply in SFRCS Channel 3, although there have been failures of this same type supply in SFRCS Channel 4.

LER #83-019

TOLEDO EDISON

February 19, 1985

Log No. K85-388
File: RR 2 (NP-33-83-26)

Docket No. 50-346
License No. NPF-3

U. S. Nuclear Regulatory Commission
Document Control Desk
Washington, D. C. 20555

Gentlemen:

Enclosed is Revision 1 to Licensee Event Report 83-019. The revisions to the report are indicated by a "1" in the left margin of each page.

Please replace your previous copy of this report with the attached revision.

Yours truly,

Stephen M. Quennoz

Stephen M. Quennoz
Plant Manager
Davis-Besse Nuclear Power Station

SMQ/ljk

Enclosure

cc: Mr. James G. Keppler,
Regional Administrator,
USNRC Region III

Mr. Walt Rogers
DB-1 NRC Resident Inspector

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