

LICENSEE EVENT REPORT

CONTROL BLOCK

(PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

1 0 H D B S 1 2 0 0 - 0 0 0 0 0 0 - 0 0 3 4 1 1 1 1 4 5
9 LICENSE CODE 14 15 LICENSE NUMBER 25 26 LICENSE TYPE 30 37 CAT 38

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

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

0 2 (NP-32-81-06) On 10/16/81 an evaluation of the calibration method and the actual test
0 3 data on calibrating the hot leg temperature input to the Reactor Protection System
0 4 (RPS) revealed that the pressure/temperature trip setpoints on Channels 2 and 4, whe
0 5 combined with the maximum postulated inaccuracies, were less conservative than the
0 6 accident analysis value used to determine the trip setpoint in Table 2.2-1 of Techni-
0 7 cal Specification 2.2.1. There was no danger to the health and safety of the public
0 8 or to station personnel.

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SYSTEM CODE I A 11 CAUSE CODE D 12 CAUSE SUBCODE Z 13 COMPONENT CODE X X X X X X X 14
9 10 11 12 13 18
COMP. SUBCODE X 15 VALVE SUBCODE Z 16
19 20
17 LER NO. REPORT NUMBER 8 1 21 22
EVENT YEAR 8 1
21 22
SEQUENCE REPORT NO. 0 6 0 24 26
OCCURRENCE CODE 0 1 28 29
REPORT TYPE T 30
REVISION NO. 0 32
ACTION TAKEN E 18 G 19 33 34
FUTURE ACTION 35
EFFECT ON PLANT Z 20 35
SHUTDOWN METHOD Z 21 36
HOURS 0 0 0 0 37 40
ATTACHMENT SUBMITTED Y 23 41
NPRD-4 FORM SUB. N 24 42
PRIME COMP. SUPPLIER Z 25 43
COMPONENT MANUFACTURER Z 9 2 9 44 47

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

1 0 The cause of this occurrence is attributable to procedural deficiency in that the tol-
1 1 erances listed as acceptable in the procedure when combined with the instrument string
1 2 inaccuracies resulted in unacceptable overall inaccuracies. As a precautionary
1 3 measure, FCR 81-266 was implemented on 10/14/81 to reset the bistables. The procedure
1 4 and/or setpoint will be revised prior to the next performance of the procedure.

1 5 FACILITY STATUS E 28 9 9 29 NA 30 OTHER STATUS 31 METHOD OF DISCOVERY C 31 Engineering Analysis 32
7 8 9 10 11 12 13 44 45 46
ACTIVITY CONTENT Z 33 Z 34 NA 35 AMOUNT OF ACTIVITY 36 LOCATION OF RELEASE 36
7 8 9 10 11 12 13 44 45 46
PERSONNEL EXPOSURES NUMBER 0 0 0 37 TYPE Z 38 DESCRIPTION NA 39
7 8 9 10 11 12 13 44 45 46
PERSONNEL INJURIES NUMBER 0 0 0 40 DESCRIPTION NA 41
7 8 9 10 11 12 13 44 45 46
LOSS OF OR DAMAGE TO FACILITY TYPE Z 42 DESCRIPTION NA 43
7 8 9 10 11 12 13 44 45 46
PUBLICATION ISSUED N 44 DESCRIPTION NA 45
7 8 9 10 11 12 13 44 45 46

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NRC USE ONLY

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TOLEDO EDISON COMPANY
DAVIS-BESSE NUCLEAR POWER STATION UNIT ONE
SUPPLEMENTAL INFORMATION FOR LER NP-32-81-06

DATE OF EVENT: October 1, 1981

FACILITY: Davis-Besse Unit 1

IDENTIFICATION OF OCCURRENCE: Two channels of Reactor Protection System (RPS) pressure/temperature trip strings less conservative than Technical Specification values when combined with maximum postulated instrument and calibration inaccuracies

Conditions Prior to Occurrence: The unit was in Mode 1 with Power (MWT) = 2772 and Load (Gross MWE) = 926.

Description of Occurrence: On October 16, 1981, an engineering evaluation of the method of calibration used in Surveillance Test ST 5030.06, "Reactor Coolant System (RCS) Temperature Input to RPS Refueling Period Calibration" and results of actual test data from the April 1981 calibration was made. This temperature input is used for the high temperature and pressure/temperature trips of the RPS. The evaluation revealed that the maximum postulated string error for the test performed in April 1981 is 1.63°F. This exceeds the 1.24°F used in calculation of the actual RPS pressure/temperature trip setpoint in the field. Based on the calibration data from April 1981, the evaluation further revealed that although the actual high temperature trip setpoints in the field were conservative on all four RPS channels, the pressure/temperature input strings on Channels 2 and 4, when combined with maximum postulated inaccuracies, were less conservative than the accident analysis value used to determine the trip setpoint in Table 2.2-1 (functional unit 6) of the Technical Specifications.

Designation of Apparent Cause of Occurrence: The cause of this occurrence is attributable to procedural deficiency in that the tolerances listed as acceptable in the procedure when combined with the instrument string inaccuracies resulted in unacceptable overall inaccuracies.

Analysis of Occurrence: There was no danger to the health and safety of the public or to station personnel. The actual pressure/temperature trip setpoint in RPS Channels 2 and 4 was less conservative only by 5.17 psig (0.41°F). The NSSS vendor has indicated that this non-conservatism has an impact of reducing the minimum design DNBR from 1.43 to approximately 1.416. The vendor has also stated that the pressure/temperature trip includes an inherent 15 psig margin of conservatism which more than offsets the effect of 5.17 psig non-conservatism. Furthermore, the RPS pressure/temperature trip is not used as a controlling trip for any of the accidents analyzed in Chapter 15 of the FSAR.

Corrective Action: As a precautionary measure, Facility Change Request 81-266 was written and implemented on October 14, 1981 to reset the pressure/temperature bistables to ensure tripping within the acceptable design DNBR limit. Nuclear Engineering Department is developing a set of guidelines to revise Surveillance Test ST 5030.06 to reduce the overall inaccuracies in the calibration procedure and/or to increase the margin between the actual setpoint in the field and the accident analysis value. The procedure and/or the setpoint will be revised prior to the next performance of this test.

Failure Data: No previous occurrences of this type have been experienced.

LER #81-060