



EDISON PLAZA
300 MADISON AVENUE
TOLEDO, OHIO 43652-0001

AB-93-0019
NP-33-93-002

Docket No. 50-346

License No. NPF-3

May 20, 1993

United States Nuclear Regulatory Commission
Document Control Desk
Washington, D. C. 20555

Gentlemen:

LER 93-002
Davis-Besse Nuclear Power Station, Unit No. 1
Date of Occurrence - April 22, 1993

Enclosed please find Licensee Event Report 93-002, which is being submitted to provide 30 days written notification of the subject occurrence. This LER is being submitted in accordance with 10 CFR 50.73(a)(2)(i).

Very truly yours,

Louis F. Storz
Plant Manager
Davis-Besse Nuclear Power Station

LFS/dlc

Enclosure

cc: Mr. A. Bert Davis
Regional Administrator
USNRC Region III

Mr. Stan Stasek
DB-1 NRC Sr. Resident Inspector

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NRC FORM 366 (5-92)		U.S. NUCLEAR REGULATORY COMMISSION			APPROVED BY OMB NO. 3150-0104 EXPIRES 5/31/95						
LICENSEE EVENT REPORT (LER)											
(See reverse for required number of digits/characters for each block)											
FACILITY NAME (1) Davis-Besse Unit No. 1					DOCKET NUMBER (2) 05000 -346			PAGE (3) 1 OF 4			
TITLE (4) Mode 4 Entry with Make-up Pump No. 1 Inoperable (TS 3.0.4 Violation)											
EVENT DATE (5)			LER NUMBER (6)			REPORT NUMBER (7)			OTHER FACILITIES INVOLVED (8)		
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER	
04	22	93	93	002	00	05	20	93		05000	
									FACILITY NAME	DOCKET NUMBER	
										05000	
OPERATING MODE (9)		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)									
4		20.402(b)			20.405(c)			50.73(a)(2)(iv)			73.71(b)
POWER LEVEL (10)		000			20.405(a)(1)(i)			50.73(a)(2)(v)			73.71(c)
					20.405(a)(1)(ii)			50.73(a)(2)(vii)			OTHER
					20.405(a)(1)(iii)			50.73(a)(2)(viii)(A)			(Specify in Abstract below and in Text, NRC Form 366A)
					20.405(a)(1)(iv)			50.73(a)(2)(viii)(B)			
					20.405(a)(1)(v)			50.73(a)(2)(ix)			
LICENSEE CONTACT FOR THIS LER (12)											
NAME Andrew V. Antrassian, Associate Engineer - Licensing								TELEPHONE NUMBER (Include Area Code) (419) 321-7908			
COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)											
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPDOS		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPDOS	
SUPPLEMENTAL REPORT EXPECTED (14)								EXPECTED SUBMISSION DATE (15)			
YES (If yes, complete EXPECTED SUBMISSION DATE)				X				NO			
ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines) (16)											
<p>On April 22, 1993, at approximately 2057 hours, the unit entered Mode 4 (from Mode 5) with Makeup Pump 1-1 functional but electrically inoperable and Reactor Coolant System (RCS) pressure approximately 250 psig. This is a violation of Technical Specification 3.0.4 which prohibits mode changes unless Limiting Conditions for Operation are met without reliance on Action Statements.</p> <p>Prior to Mode 4 entry, Makeup Pump 1-1 was declared operable with the close power fuses for breaker AC105 intentionally removed. The fuses allow remote closure (i.e., from the control room) of breaker AC105 for Makeup Pump 1-1. The decision to leave the fuses removed was an attempt to provide additional safety margin against a potential low RCS temperature overpressure event.</p> <p>On April 24, 1993, at approximately 0049 hours, the condition was identified and the close power fuses were installed. Training on makeup pump operability, including required reading of this Licensee Event Report, will be completed by July 1, 1993.</p>											

REQUIRED NUMBER OF DIGITS/CHARACTERS
FOR EACH BLOCK

BLOCK NUMBER	NUMBER OF DIGITS/CHARACTERS	TITLE
1	UP TO 46	FACILITY NAME
2	8 TOTAL 3 IN ADDITION TO 05000	DOCKET NUMBER
3	VARIES	PAGE NUMBER
4	UP TO 76	TITLE
5	6 TOTAL 2 PER BLOCK	EVENT DATE
6	7 TOTAL 2 FOR YEAR 3 FOR SEQUENTIAL NUMBER 2 FOR REVISION NUMBER	LEI NUMBER
7	6 TOTAL 2 PER BLOCK	REPORT DATE
8	UP TO 18 - FACILITY NAME 8 TOTAL - DOCKET NUMBER 3 IN ADDITION TO 05000	OTHER FACILITIES INVOLVED
9	1	OPERATING MODE
10	3	POWER LEVEL
11	1 CHECK BOX THAT APPLIES	REQUIREMENTS OF 10 CFR
12	UP TO 50 FOR NAME 14 FOR TELEPHONE	LICENSEE CONTACT
13	CAUSE VARIES 2 FOR SYSTEM 4 FOR COMPONENT 4 FOR MANUFACTURER NPRDS VARIES	EACH COMPONENT FAILURE
14	1 CHECK BOX THAT APPLIES	SUPPLEMENTAL REPORT EXPECTED
15	6 TOTAL 2 PER BLOCK	EXPECTED SUBMISSION DATE

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (MNBB 7714), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1)		DOCKET NUMBER (2)		LER NUMBER (6)			PAGE (3)
Davis-Besse Unit No. 1		05000-346		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	2 OF 4
				93	002	00	

TEXT (If more space is required, use additional copies of NRC Form 365A) (17)

Description of Occurrence

On April 22, 1993, at approximately 2057 hours, the unit entered Mode 4 (from Mode 5) with Makeup Pump 1-1 (CB) functional but electrically inoperable from the control room. The unit was in the process of heat up in preparation for return to power from the Eighth Refueling Outage (8RFO).

Technical Specification (TS) 3.1.2.4 in part requires two makeup pumps operable in Mode 4 with Reactor Coolant System (RCS-AB) pressure greater than or equal to 150 psig. On April 22, 1993, at approximately 2057 hours, Mode 4 was entered with close power fuses for breaker AC105, Makeup Pump 1-1, not installed and RCS pressure approximately 250 psig. Due to circumstances unrelated to this event, the unit re-entered Mode 5 approximately 25 hours later. This timeframe is well within the Action Statement requirements TS 3.1.2.4. Consequently, no violation of TS 3.1.2.4 occurred as a result of this event.

However, Technical Specification 3.0.4 prohibits mode changes unless the Limiting Conditions for Operation are met without reliance on the provisions of the Action Statements.

During the night shift of April 21, 1993, preparations were underway for Mode 4 entry. DB-OP-06900, Plant Heatup, Step 3.63.5 requires completion of a prestart checklist for the idle makeup pump and requires both makeup pumps operable. Prior to performance of the checklist, the Shift Supervisor determined that the close power fuses for breaker AC105 should not be installed until the unit was closer to Mode 4 entry. This action was intended to conservatively protect the unit from a potential low RCS temperature overpressure event resulting from an inadvertent start of the idle makeup pump. The close power fuses allow remote closure (i.e., from the control room) of breaker AC105 for Makeup Pump 1-1.

The prestart checklist for Makeup Pump 1-1 is contained in Attachment 4 of DB-OP-06006, Makeup and Purification System. The checklist was completed with the exception of installation of the close power fuses in breaker AC105. The Assistant Shift Supervisor annotated the checklist to indicate that the close power fuses were not installed.

The Shift Supervisor later initialed DB-OP-06900, Step 3.63.5, indicating the checklist was complete and both makeup pumps were operable. The Shift Supervisor considered Makeup Pump 1-1 operable because breaker AC105 could have been closed locally if the pump was needed, and there are no automatic

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FACILITY NAME (1)		DOCKET NUMBER (2)		LER NUMBER (8)			PAGE (3)
Davis-Besse Unit No. 1		05000-346		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	3 OF 4
				93	002	00	

TEXT (If more space is required, use additional copies of NRC Form 366A) (17)

Description of Occurrence (con't)

start features associated with the makeup pumps. While these assumptions are correct, Surveillance Requirement 4.1.2.4.a states that the capability of starting the pumps from the control room is a condition of operability for the makeup pumps.

Therefore, this event constitutes a violation of TS 3.0.4 and is reportable under the provisions of 10CFR50.73(a)(2)(i)(B).

Apparent Cause of Occurrence

The Shift Supervisor's decision not to install the close power fuses for AC105 was an attempt to provide additional safety margin against a low RCS temperature overpressure event. This additional margin is not required by plant procedures or by Technical Specifications. Considering the makeup pump operable with the close power fuses not installed was an incorrect assumption. The cause of this occurrence is considered personnel error. A contributing factor is that other operating crews had the opportunity to identify the incorrect status of Makeup Pump 1-1 and did not recognize the incorrect status of the pump.

Analysis of Occurrence

During the time period that close power fuses were not installed in breaker AC105, Makeup Pump Number 2 was operable, running, and providing its intended function of maintaining RCS volume. During Mode 4 operation, only one pump is needed to provide the RCS volume control function. Makeup Pump 1-1 was intended to be the idle pump during this time period and was operable in all respects with the exception of the close power fuses not installed in breaker AC105.

No automatic start functions are associated with the makeup pumps. At no time during this occurrence was an attempt made to start Makeup Pump 1-1, nor was there any need for a second makeup pump to provide RCS volume control. In addition, the Action Statement for TS 3.1.2.4 was not violated during this event.

Based on this information, this event did not adversely affect the operation of the plant and is of minimal safety significance.

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Davis-Besse Unit No. 1		05000 -346		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	4 OF 4
				93	002	00	

TEXT (If more space is required, use additional copies of NRC Form 365A) (17)

Corrective Action

Due to circumstances unrelated to this event, the unit re-entered Mode 5 on April 23, 1993, at 2232 hours. On April 24, 1993, at approximately 0049, with the unit still in Mode 5, the close power fuses for Makeup Pump 1-1 were installed.

The Shift Supervisor involved in determining operability of the makeup pump with the close power fuses for breaker AC105 not installed was counseled subsequent to this event.

Although the condition was discovered, documented, and corrected by an oncoming operating crew, other operating crews had the opportunity to correct the status of the inoperable makeup pump. Based on this fact, training on makeup pump operability, including required reading of this LER, will be conducted for all licensed personnel. This training will be completed by July 1, 1993.

Failure Data

This is the first LER involving a TS 3.0.4 violation attributed to an incorrect assumption regarding equipment operability.

NP 33-93-002

PCAQ No. 93-0274