FirstEnergy

Davis-Besse Nuclear Power Station
5501 North State Route 2
Oak Harbor, Ohio 43449-9760

NP-33-00-005-00

Docket No. 50-346

License No. NPF-3

July 7, 2000

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

Ladies and Gentlemen:

LER 2000-005
Davis-Besse Nuclear Power Station, Unit No. 1
Date of Occurrence – June 8, 2000

Enclosed please find Licensee Event Report 2000-005, which is being submitted to provide 30 days written notification of the subject occurrence. This LER is being submitted in accordance with 10CFR50.73(a)(2)(i)(B).

Very truly yours,

James H. Lash / BCL

James H. Lash
Plant Manager
Davis-Besse Nuclear Power Station

AWB/dlc

Enclosure

cc: Mr. J. E. Dyer, Regional Administrator, USNRC Region III
Mr. K. S. Zellers, DB-1 NRC Senior Resident Inspector
Utility Radiological Safety Board

IE22

Docket Number 50-346
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Attachment

COMMITMENT LIST

The following list identifies those actions committed to by the Davis-Besse Nuclear Power Station in this document. Any other actions discussed in the submittal represent intended or planned actions by Davis-Besse. They are described only as information and are not regulatory commitments. Please notify the Manager - Regulatory Affairs (419-321-8466) at Davis-Besse of any questions regarding this document or associated regulatory commitments.

COMMITMENTS	DUE DATE
The zone hand held computers will be reviewed to determine if similar component manipulations directed by the handheld computer should be proceduralized.	August 18, 2000

NRC FORM 366 (6-1998) U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB NO. 3150-0104 EXPIRES 06/30/2001

Estimated burden per response to comply with this mandatory information collection request: 50.0 hrs. Reported lessons learned are incorporated into the licensing process and fed back to industry. Forward comments regarding burden estimate to the Records Management Branch (T-6 F33), 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. If an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

LICENSEE EVENT REPORT (LER)

(See reverse for required number of digits/characters for each block)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
Davis-Besse Unit Number 1	05000346	1 OF 4

TITLE (4)

Main Steam Drain Valve Left Open Rendering Auxiliary Feedwater Pump Turbine Inoperable

EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
06	08	2000	2000	-- 005 --	00	07	07	2000		05000
									FACILITY NAME	DOCKET NUMBER 05000

OPERATING MODE (9)	1	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)					
POWER LEVEL (10)	100	20.2201(b)	20.2203(a)(2)(v)	X	50.73(a)(2)(i)		50.73(a)(2)(viii)
		20.2203(a)(1)	20.2203(a)(3)(i)		50.73(a)(2)(ii)		50.73(a)(2)(x)
		20.2203(a)(2)(i)	20.2203(a)(3)(ii)		50.73(a)(2)(iii)		73.71
		20.2203(a)(2)(ii)	20.2203(a)(4)		50.73(a)(2)(iv)		OTHER
		20.2203(a)(2)(iii)	50.36(c)(1)		50.73(a)(2)(v)		Specify in Abstract below or in NRC Form 366A
		20.2203(a)(2)(iv)	50.36(c)(2)		50.73(a)(2)(vii)		

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER (Include Area Code)
Aaron W. Bless, Engineer - Licensing	(419) 321-8543

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX

SUPPLEMENTAL REPORT EXPECTED (14)			EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
YES (If yes, complete EXPECTED SUBMISSION DATE).	X	NO				

ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines) (16)

On June 8, 2000, with the plant in Mode 1 operating at 100 percent power, valve Main Steam (MS) 750, Auxiliary Feedwater Pump Turbine (AFPT) 1 Trip Throttle Valve Above Seat Drain, was found one turn from full open. The valve MS 750 along with nine other valves (five valves for AFPT 1 and 2 each) are operated once per week to drain condensate from the Main Steam supply piping to the AFPTs. Valve MS 750 is required to be closed in order to maintain the operability of AFPT 1. Investigation of the event concluded that MS 750 was last operated on June 1, 2000, during the weekly drain evolution. Valve MS 750 was apparently not closed after draining the condensate from the Main Steam piping. Because the valve was out of position for one week, exceeding the 72 hour Action requirement of Technical Specification 3.7.1.2, the plant was in violation of the Technical Specification. A procedure change which requires signoffs and independent verifications on the restoration for each of these ten valves required for draining the AFPT steam supply lines has been completed. This condition is reportable as operation prohibited by the plant's Technical Specifications in accordance with 10CFR50.73(a)(2)(i)(B).

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Davis-Besse Unit Number 1	05000346	2000	-- 005 --	00	2 OF 4

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

Description of Occurrence:

On June 8, 2000, with the plant in Mode 1 operating at 100 percent power, valve Main Steam (MS) 750, Auxiliary Feedwater Pump Turbine (AFPT) 1 Trip Throttle Valve Above Seat Drain [BA-LOV], was found open. The valve MS 750, along with nine other valves (five valves for AFPT 1 and 2 each) are operated once per week to drain condensate from the Main Steam [SB] supply piping to the AFPT [BA-TRB]. During the drain on June 8 while opening the valve, an Equipment Operator found the valve was one turn from full open. Valve MS 750 is required to be closed in order to maintain operability of AFPT 1. With MS 750 open, steam would fill the AFPT room upon a start of the AFPT, rendering the AFPT incapable of performing its intended safety function.

The Auxiliary Feedwater (AFW) system [BA] provides feedwater to the steam generators (SG) for the removal of reactor decay heat in the absence of main feedwater [SJ] and/or to promote natural circulation of the Reactor Coolant System [AB] in the event of a loss of all four reactor coolant pumps. With valve MS 750 open, AFPT 1 was considered inoperable. Technical Specification 3.7.1.2 requires that two trains of auxiliary feedwater shall be operable while in Modes 1-3. With one train of Auxiliary Feedwater inoperable, the Technical Specification Action requirement is to restore the train to operable status within 72 hours or be in Hot Shutdown within the next 12 hours.

Valve MS 750 is routinely operated weekly on the night shift to drain condensate from the MS to AFPT 1 piping, or when AFPT 1 has been run in the last 24 hours. On June 1, 2000, at approximately 0200 hours, the weekly drain evolution was performed as directed by the Equipment Operator's hand held computer. The hand held computer is used by operators making periodic tours in the plant to record data on operating equipment and to prompt performance of some routine periodic evolutions. In this case, the hand held computer prompts the user to estimate the condensate accumulated from the drain of each valve and enter the estimated amount into the computer. Once the data has been entered, the hand held computer proceeds to prompt the user to estimate the condensate for the next valve. There are no specific directions or procedural guidance to open the valves, measure the condensation, and close the valves for the weekly drain.

During the time period between June 1, through June 7, an Equipment Operator entered the AFPT rooms each shift to perform readings on operator rounds. The amount of time for shiftly readings in AFPT 1 room is typically 1 to 2 minutes. No testing or maintenance associated with AFW train 1 was conducted. During this time period between June 1 and June 7, the plant operators that entered the AFPT rooms 1 and 2 did not manipulate valve MS 750. Valve MS 750 is not in an area where it is likely that the valve was inadvertently opened.

On June 8, 2000, at approximately 0200 hours, a different Equipment Operator than the previous week and a Trainee entered AFPT 1 room to take readings and measure accumulated condensate from the drains on AFPT 1. The Trainee opened MS 750 and reported to the Equipment Operator that MS 750 opened approximately one turn. This indicated that MS 750 was already open. This condition was reported to the Shift Supervisor and MS 750 was closed. All other drain valves associated with the weekly AFPT drain were verified closed. Condition Report 2000-1578 was initiated to document and investigate this event.

Because the valve was not discovered out of position until after being open for one week, the 72 hours allowed by Technical Specification Action 3.7.1.2.a to continue operation of the plant were exceeded. This violation of Technical Specification is reportable in accordance with 10CFR50.73(a)(2)(i)(B).

Apparent Cause of Occurrence:

The first apparent cause of this event has been concluded to be inadequate work practices in that the Equipment Operator failed to close the valve MS 750 after draining the MS to AFPT 1 piping on June 1, 2000. The investigation of this event concluded that the Equipment Operator who performed the weekly drain of condensate from MS to AFPT 1 piping on June 1, was the last one to operate the valve. Valve MS 750 was apparently not closed after draining the condensate from the Main Steam piping. Though not required by procedure, the AFPT drain evolution was adversely affected by the failure to verify (self-check) the system alignment (MS 750 closed) prior to implementing further action.

The second apparent cause of this event was inadequate written communication in that there was no specific directions or procedural guidance for completion of the AFPT weekly drain evolution. Procedure DP-OP-00000, "Conduct of Operations," describes the general administrative controls, which have been established for the activities of Operations Section personnel. This procedure states that an Independent Verification shall be required for all valves, breakers and other components in safety related systems where improper positioning could adversely affect system operation or containment integrity. Although the improper positioning of the AFPT drain valves could adversely affect the operation of the AFW train, there was no Independent Verification requirement or procedure controls for the weekly drain of the AFPT Steam Lines.

Analysis of Occurrence:

This event is of minimal safety significance. The AFPT 2 was operable during the time that valve MS 750 was open. The Motor Driven Feedwater Pump was also operable during the time that AFPT 1 was inoperable and could have provided the intended safety function of the AFW system. In addition, the Main Feedwater system was in operation the entire time.

It is believed that AFPT 1 would have started and supplied AFW to the SG with MS 750 open. After starting AFPT 1 with valve MS 750 in the open position, steam would have entered the AFPT 1 room through the Main Steam line from the selected Once Through Steam Generator which may have affected the length of time the AFPT would have remained functional. The AFPT 1 room components have not been analyzed to determine if they would have remained operable in a High Energy Line Break scenario and are not required to be analyzed by the Davis-Besse Nuclear Power Station Updated Safety Analysis Report.

A calculation of the core damage probability (CDP) was performed to evaluate the risk associated with the unavailability of the Auxiliary Feedwater Pump (AFP) 1 during the week of June 1 through June 8. With the AFP 1 unavailable for one week and accounting for planned equipment unavailabilities, the CDP was determined to be 1.16E-06. The CDP for this event is less than the level of 1E-05 that would be considered potentially risk significant. The calculation is considered conservative, due to the fact that the calculation did not take into affect the possibility that the AFPT would run for any period of time.

Corrective Actions:

The Equipment Operator who operated MS 750 on June 1, 2000, was counseled regarding the importance of ensuring valves are restored to their appropriate configuration.

Standing Order 00-0006, Operations On-Shift Configuration Control Action Plan, was issued on June 16, 2000, to provide guidance for independent verifications, peer checks and oversight of "in the field" activities for component manipulations.

Procedure DB-OP-06233, Auxiliary Feedwater System, was changed on June 13, 2000, to proceduralize the weekly drain evolution. The procedure has a signoff to throttle open the 10 valves needed to perform the drain activities for both AFPT 1 and 2. Once each of the drains has been completed, a signoff and an Independent Verification are required for restoration.

The zone hand held computers will be reviewed by August 18, 2000, to determine if similar component manipulations directed by the handheld computer should be proceduralized.

Failure Data:

There have been no LERs within the past 3 years that involved a valve mis-positioning that rendered a safety system inoperable.

A similar event occurred at the DBNPS on December 1, 1998, when valve MS 749, AFPT 2 Trip Throttle Valve Below Seat Drain, was found open, which rendered the AFPT incapable of performing its intended safety function. This event was documented in the DBNPS Corrective Action process under Potential Condition Adverse to Quality Report (PCAQR) 1998-2063. At the time of this occurrence, draining of the MS to AFPT piping was being performed on a daily basis. The condition was discovered within approximately 24 hours, and did not violate the Technical Specification 3.7.1.2 Action requirements.

Energy Industry Identification System (EIIS) codes are identified in the text as [XX].

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