

## LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)

Davis-Besse Unit 1

DOCKET NUMBER (2)

0 5 0 0 0 3 4 6 1 OF 0 2

PAGE (3)

TITLE (4)

Safety Features Actuation System Level 1 Actuation

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 NAMES		DOCKET NUMBER(S)					
0	1	2	5	8	5	8	5	0	0	3	0	0	0	0	0	0
0	1	2	5	8	5	8	5	0	0	3	0	0	0	0	0	0

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5: (Check one or more of the following) (11)

OPERATING MODE (9)	20.402(b)	20.406(c)	50.73(a)(2)(iv)	73.71(b)
1			<input checked="" type="checkbox"/>	
POWER LEVEL (10)	20.405(a)(1)(i)	50.38(c)(1)	50.73(a)(2)(v)	73.71(c)
0	20.405(a)(1)(ii)	50.38(c)(2)	50.73(a)(2)(vi)	
3	20.405(a)(1)(iii)	50.73(a)(2)(i)	50.73(a)(2)(viii)(A)	OTHER (Specify in Abstract below and in Text, NRC Form 365A)
9	20.405(a)(1)(iv)	50.73(a)(2)(ii)	50.73(a)(2)(viii)(B)	
	20.405(a)(1)(v)	50.73(a)(2)(iii)	50.73(a)(2)(ix)	

LICENSEE CONTACT FOR THIS LER (12)

NAME

Bruce Hickman

TELEPHONE NUMBER

AREA CODE

4 1 9 2 5 9 - 5 0 0 0

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

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPDs	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPDs
B	J	E	D	E	T	V	1	1	5

SUPPLEMENTAL REPORT EXPECTED (14)

YES (If yes, complete EXPECTED SUBMISSION DATE)	NO	EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
<input type="checkbox"/>	<input checked="" type="checkbox"/>				

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

On January 25, 1985, the Station experienced a Safety Features Actuation System Level 1 actuation. The actuation isolated containment atmosphere from the rest of the plant. There was no effect on power operation with the Station in Mode 1 at 39 percent of rated thermal power. The Station had removed the Channel 3 Safety Features Actuation System Containment Radiation Detector from service two days earlier and placed its channel in the tripped condition per the action statement of Technical Specification 3.3.2.1 to permit maintenance. When the Channel 4 Safety Features Actuation System Containment Radiation Detector spiked, it caused the Level 1 actuation. Within ten minutes RE2007 was reset, and actuated equipment was restored to normal.

This is being reported under 10CFR50.73(a)(2)(iv) as an event that resulted in the automatic actuation of an Engineered Safety Feature.

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## LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO. 3150-0104

EXPIRES 8/31/85

FACILITY NAME (1)  Davis-Besse Unit 1	DOCKET NUMBER (2)  0 5 0 0 0 3 4 6 8 5 - 0 0 3 - 0 0 0 2 OF 0 2	LER NUMBER (6)			PAGE (3)	
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		

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

Description of Occurrence: On January 25, 1985, the Station experienced a Safety Features Actuation System, SFAS, (JE) Level 1 actuation. The Station was in Mode 1 at 39 percent of rated thermal power. On January 23, 1985, the Station had taken SFAS Channel 3 Radiation Detector RE2006 out of service for maintenance and had placed that channel in the tripped condition per Action Statement 9 of Technical Specification 3.3.2.1.

The Level 1 actuation closed containment air sampling isolation valves, closed selected auxiliary building dampers, started the Emergency Ventilation System, EVS, (VC), fans, and stopped the Containment Purge Fans and the Control Room heating ventilation/air conditioning units. It did not affect power operation. The SFAS high radiation trip was reset and the equipment restored to normal within ten minutes.

This is being reported under 10CFR50.73(a)(2)(iv) as an event that resulted in the automatic actuation of an Engineered Safety Feature.

Designation of Apparent Cause of Occurrence: The Level 1 actuation was caused by the SFAS Channel 4 Containment Radiation Detector RE2007 spiking with Channel 3 Detector RE2006 having been placed in its tripped condition for maintenance on January 23, 1985. With one channel in its tripped condition, it takes only one other channel to trip to cause the Level 1 actuation. The cause of the spiking of RE2007 has not been determined. The channel output returned to normal levels after spiking. The spiking is thought to be due to the way the detector is mounted to the Shield Building wall. The cabinet is not completely insulated from the mounting bolts which do make contact with steel rebar in the wall. It is possible that some unintended charge momentarily affected the detector.

Analysis of Occurrence: The Level 1 actuation did not cause a plant upset. Reactor power level was not affected. Placing the Channel 3 radiation detector in a tripped condition to permit maintenance makes the system logic more conservative by requiring only one of the remaining three detectors to trip to cause an actuation. The effect on the plant would have been the same at any power level.

Corrective Action: At 2208 hours on January 25, 1985, the SFAS Channel 4 Containment High Radiation Bistable was reset, and the Level 1 actuated equipment was restored to normal. RE2007 (Channel 4) operated normally after the spiking incident and was not replaced. RE2006, the Channel 3 detector, was replaced under Maintenance Work Order 1-85-0391-00 and declared operable at 2135 hours on January 29, 1985.

Facility Change Request 85-042 has been initiated to install insulated mounts on SFAS Containment Radiation Detectors.

Failure Data: This was the first SFAS Level 1 actuation in the past twelve months. The previous reported failure of RE2007 was in Licensee Event Report NP-33-83-44 (LER 83-036). Although there have been subsequent failures and/or spiking problems individual detectors, none caused SFAS Level 1 actuations.

Report No: NP-33-85-02

DVR No(s): 85-015



February 22, 1985

Log No. K85-443  
File: RR 2 (NP-33-85-02)

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

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

Gentlemen:

LER No. 85-003  
Davis-Besse Nuclear Power Station Unit 1  
Date of Occurrence: January 25, 1985

Enclosed is Licensee Event Report 85-003 which is being submitted in accordance with 10CFR50.73, to provide 30 day written notification of the subject occurrence.

Yours truly,

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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