

LICENSEE EVENT REPORT (LER)

Facility Name (1) Dresden Nuclear Power Station, Unit 3 Docket Number (2) 0 5 0 0 0 2 4 9 Page (3) 1 of 0 4

TITLE (4) Anticipated Transient Without Scram System Actuation Due to Inadequate Operator Training

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	6	1	4	8	8	8	8	8	N/A	0 5 0 0 0 0	
0	6	1	4	8	8	8	8	8	N/A	0 5 0 0 0 0	

OPERATING MODE (9) N THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10CFR (Check one or more of the following) (11)

20.402(b)	20.405(c)	X	50.73(a)(2)(iv)	73.71(b)
20.405(a)(1)(i)	50.36(c)(1)		50.73(a)(2)(v)	73.71(c)
20.405(a)(1)(ii)	50.36(c)(2)		50.73(a)(2)(vii)	Other (Specify in Abstract below and in Text)
20.405(a)(1)(iii)	50.73(a)(2)(i)		50.73(a)(2)(viii)(A)	
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)(x)	

LICENSEE CONTACT FOR THIS LER (12)

Name: Ronald Jackson, Technical Staff Engineer Telephone Number: 8 1 5 9 4 2 - 2 9 2 0 Ext. 483

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

CAUSE	SYSTEM	COMPONENT	MANUFAC-TURER	REPORTABLE TO NPRDS	CAUSE	SYSTEM	COMPONENT	MANUFAC-TURER	REPORTABLE TO NPRDS
X	J E	F C V	C 2 9 5	Y					

SUPPLEMENTAL REPORT EXPECTED (14) Expected Submission Date (15) X | NO

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

On June 14, 1988 at 1030 hours with Unit 3 shutdown for a refueling outage and all control rods at their full in position, an Anticipated Transient Without Scram (ATWS) trip occurred. This trip was indicated by the receipt of the following Control Room annunciators: ATWS Channel A or B Trip, ATWS Level/Pressure Abnormal, and Scram Valve Air Supply Low Pressure. The trip was the result of the water in the variable instrument leg of the ATWS level transmitters being bled off due to a leaking instrument flow check valve. The root cause was determined to be inadequate operator training on how to isolate various types of instruments based on their trip application. The safety significance was deemed to be minimal based on the fact that the ATWS system failed in the conservative direction and all equipment functioned as designed during the evolution. The instrument line was backfilled and the ATWS trip reset. Additionally, the Operating Department will be trained on the proper method to be utilized to isolate various types of instruments. The last ATWS trip occurred March 10, 1985 as reported by LER 85-13 Docket 050-237.

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TEXT

PLANT AND SYSTEM IDENTIFICATION

General Electric Boiling Water Reactor - 2527 Mwt rated core thermal power. Energy Industry Identification System (EIIS) codes are identified in the text as [XX].

Nuclear Tracking System (NTS) tracking code numbers are identified in the text as (XXX-XXX-XX-XXXXX).

EVENT IDENTIFICATIONS:

Unit 3 Anticipated Transient Without Scram (ATWS) System Actuation Due to Inadequate Training.

A. CONDITIONS PRIOR TO EVENT

Unit: 3 Event Date: June 14, 1988 Event Time: 1030
 Reactor Mode: N Mode Name: Shutdown Power Level: 0%
 Reactor Coolant System (RCS) Pressure: 0 psig

B. DESCRIPTION OF EVENT

On June 14, 1988 at 1030 hours with Unit 3 shutdown for a refueling outage and all control rods [AA] at their full in position, an Anticipated Transient Without Scram [JE] trip occurred. This trip was indicated by Control Room panel 903-5 annunciators A-8 "ATWS Channel A or B Trip", F-7 "ATWS Level/Pressure Abnormal" and A-1 "Scram Valve Air Supply Low Pressure". In addition, the Nuclear Station Operator (NSO) noticed drift alarms on the full core display and loss of the "00" position indication for all control rod drives [AA]. The NSO immediately bypassed the Scram Discharge Volume (SDV) [AA] high level scram circuitry in order to prevent a reactor scram due to high level in the scram discharge volume following this event. Subsequently, the Operating Department Shift Foreman was dispatched to the Auxiliary Electrical Equipment Room (AEER) to visually inspect the ATWS control panels. The Shift Foreman found that the B and D ATWS level indicators were indicating downscale. The Shift Foreman also found the scram air header [AA] pressure at 0 psig. An investigation into the cause of the event was initiated. The Nuclear Regulatory Commission (NRC) was notified of the event at 1115 hours in accordance with Title 10 of the Code of Federal Regulations (10 CFR) Part 50.72(b)(2)(ii).

C. APPARENT CAUSE OF EVENT

This report is being submitted to comply with 10CFR50.73(a)(2)(iv) which requires the reporting of any unplanned Engineered Safety Feature (ESF) actuation. On June 13 at 0500 hours instrument flow check valve 3-263-2-17B was taken out-of-service for the Mechanical Maintenance Department (MMD) to repair a leak. The valve was isolated by closing root valve 3-263-2-16B (see Figure 1). The leaking flow check valve, 3-263-2-17B, allowed the water in the variable leg of the B and D ATWS low water level transmitters to slowly bleed off until the trip setpoint was reached. Actual reactor vessel level remained steady during the event. The root cause of the event has been determined to be inadequate training. The Operating Department had routinely taken instrument flow check valves out-of-service by closing only the root valve. In this instance the equalizing valves for the level transmitters should have been opened, which would have failed the transmitters high, thus preventing a low water level actuation. Had the Operating Department been instructed on the proper method to isolate various instruments based on their trip function, this event would have been avoided,

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TEXT

D. SAFETY ANALYSIS OF EVENT

The ATWS system is designed to automatically trip both reactor recirculation [AD] pumps and initiate the Alternate Rod Insertion (ARI) valves [AA] in the event of a reactor low low water level or a reactor high pressure transient. The control rod insertion is initiated by the ATWS system ARI valves which depressurize the scram air header upon receiving an ATWS signal. The ARI valves and the recirculation pump trips are initiated from level and pressure sensors that are connected in two ATWS trip channels (A and B). The A and C logic sensors are associated with the Channel A ATWS circuitry and the B and D sensors are associated with the Channel B ATWS logic circuitry. Either channel is capable of initiating the required protective action. The safety significance of this event was minimal since the Channel B ATWS system failed in the conservative condition and the Channel A ATWS system was operable at all times during this event. Additionally, the Reactor Protection System [JE] was operable and available to initiate a reactor scram upon receipt of a reactor scram signal. All equipment functioned as designed during the evolution.

E. CORRECTIVE ACTIONS

Immediate corrective actions consisted of bypassing the Scram Discharge Volume high level circuitry which prevented a reactor scram due to high level in the scram discharge Volume. The high water level in the Scram Discharge Volume is caused by the water flow through the control rod drive scram outlet valve which is opened when air is bled off the scram outlet valve by the ARI valves. Subsequently the variable instrument leg was backfilled, the out-of-service cleared and the ATWS trip was reset. Training will be conducted during Operator continuing training to instruct operating personnel on the correct manner to isolate various types of instruments based on their trip function (249-200-88-06301). No further corrective actions are deemed necessary at this time.

F. PREVIOUS OCCURRENCE

The last occurrence of an ATWS trip was reported by License Event Report 85-13 Docket 050-237. On March 10, 1985 while Unit 2 was shutdown and with a reactor hydrostatic test in progress, a Channel A ATWS trip occurred from a low water level signal. The cause of the ATWS trip was a leaky instrument isolation valve which allowed hydrostatic pressure to pressurize one side of the level instrument diaphragm causing an apparent low level condition.

G. COMPONENT FAILURE DATA

Manufacturer: Chemiquip

Nomenclature: Check Valve

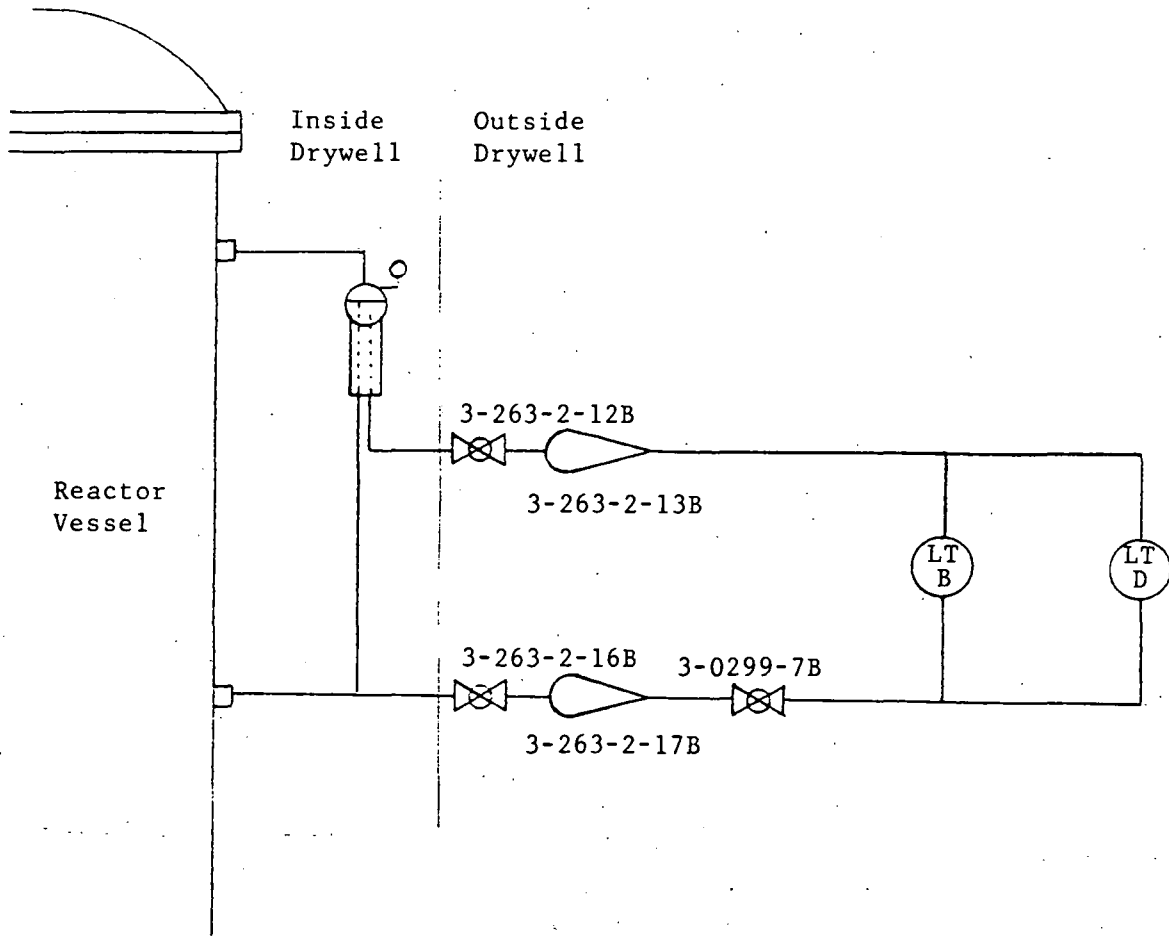
Model Number: 50 FM-11 WISS-B

An industry wide NPRDS search was conducted to determine if similar component failures have been reported. During the search, four component failures were found involving the check valve failure to operate properly. Two of the failures were caused by dirt accumulation on the valve internals while the remaining two failures were caused by valve aging and corrosion buildup on the valve's seat.

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TEXT



Channel B ATWS Level Piping Diagram

Figure 1



Commonwealth Edison

Dresden Nuclear Power Station

R.R. #1

Morris, Illinois 60450

Telephone 815/942-2920

July 12, 1988 :

EDE LTR #88-519

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

Licensee Event Report #88-016-0, Docket #050249 is being submitted as required by Technical Specification 6.6, NUREG 1022 and 10 CFR 50.73(a)(2)(iv).

E.D. Eenigenburg
Station Manager

Dresden Nuclear Power Station.

EDE/ade

Enclosure

cc: A. Bert Davis, Regional Administrator, Region III
File/NRC
File/Numerical

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