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November 21, 1994

JSPLTR 94-0021

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

Licensee Event Report 94-020, Docket 50-249 is being submitted as required by Technical Specification 6.6, NUREG 1022 and 10CFR50.73(a)(2)(iv).

Sincerely,

A handwritten signature in black ink, appearing to read "J. Stephen Perry".

J. Stephen Perry
Vice President
BWR Operations

JSP/:cfq

Enclosure

cc: J. Martin, Regional Administrator, Region III
NRC Resident Inspector's Office
File/NRC
File/Numerical

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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)											
FACILITY NAME (1) Dresden Nuclear Power Station, Unit 3					DOCKET NUMBER (2) 05000249			PAGE (3) 1 OF 4			
TITLE (4) Unit 3 Unexpected Full Reactor Scram while Shutdown during Special Test											
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		
10	29	94	94	-- 020 --	00	11	16	94	None		
									DOCKET NUMBER		
									DOCKET NUMBER		
OPERATING MODE (9)		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)									
N		20.2201(b)			20.2203(a)(3)(i)			50.73(a)(2)(iii)		73.71(b)	
POWER LEVEL (10)		20.2203(a)(1)			20.2203(a)(3)(ii)			x 50.73(a)(2)(iv)		73.71(c)	
000		20.2203(a)(2)(i)			20.2203(a)(4)			50.73(a)(2)(v)		OTHER	
		20.2203(a)(2)(ii)			50.36(c)(1)			50.73(a)(2)(vii)		(Specify in Abstract below and in Text, NRC Form 366A)	
		20.2203(a)(2)(iii)			50.36(c)(2)			50.73(a)(2)(viii)(A)			
		20.2203(a)(2)(iv)			50.73(a)(2)(i)			50.73(a)(2)(viii)(B)			
		20.2203(a)(2)(v)			50.73(a)(2)(ii)			50.73(a)(2)(x)			
LICENSEE CONTACT FOR THIS LER (12)											
NAME Kirk W. Robbins, Instrument Maintenance EA Ext. 2314							TELEPHONE NUMBER (Include Area Code) (815) 942-2920				
COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)											
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS	
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)

During the performance of Special Test Procedure SP 94-10-126, Special Procedure to Determine Root Cause of Scram While Performing Reactor Vessel High Pressure Scram Pressure Switch Calibration, an unexpected full reactor scram signal occurred while the unit was shutdown in refuel mode. The full scram occurred when the Control Systems Technician (CST) performing the valve manipulations on Instrument Rack 2203-6 inadvertently opened the bypass valve on the deadweight tester to reduce the pressure on PS 3-263-55C, Reactor Vessel High Pressure Scram Pressure Switch. Recognizing this error, the CST closed the bypass valve. The pressure transient resulting from this valve manipulation produced a momentary Reactor Protection System (RPS) Reactor Vessel Low Level Scram signal. There was no change in actual Reactor Vessel Level. All safety systems functioned as required.

**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.

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

EVENT IDENTIFICATION:

Unit 3 Unexpected full reactor scram during special test due to Personnel Error

A. PLANT CONDITIONS PRIOR TO EVENT:

Unit: 3 Event Date: 10/29/94 Event Time: 1308
 Reactor Mode: Shutdown Mode Name: Refuel Power Level: 0%
 Reactor Coolant System Pressure: 0 psig

B. DESCRIPTION OF EVENT:

On 10/28/94, a Heightened Level of Awareness (HLA) briefing was conducted by the Instrument Maintenance (IM) General Supervisor and the Instrumentation Component Engineer. It included the Operations personnel and IM personnel that were to be involved in the test. The special test procedure was covered in detail, focusing on the effects this test would have on the Operations staff.

In addition, individual roles were discussed and identified. The IM General Supervisor was assigned the role of Test Director. This was the first time the IM General Supervisor had been placed in this type of position. The Instrumentation Component Engineer was assigned the role of verifier with an Instrument A Mechanic (IM A) in the Control Room. A CST was stationed at the Analog Trip System (ATS) panels with a test recorder. The Test Director and a CST, the most experienced CST in the Department, were assigned to the instrument rack 2203-6 for valve manipulations.

On 10/29/94, Saturday, an additional HLA briefing was conducted as a pre-job brief. Following the briefing, personnel went to assigned stations and manned the sound powered phones. The Test Director decided to take the role of verifier for the CST performing the valve manipulations. The CST performing the valve manipulations was controlling the evolution, talking on the phones, and performing the procedure.

SP 94-10-126 contained three separate tests:

1. Step I.9 which completed Dresden Instrument Surveillance (DIS) 0500-01, Reactor Vessel Sustained High Pressure Scram Pressure Switch Calibration, on pressure switches 3-263-55C and 3-263-55D.
2. Step I.10 which completed valve manipulations with 13 psid and 0 psid across the instrument isolation valves for pressure switches 3-263-55C and 3-263-55D.
3. Step I.11 which allowed repeating the previous steps, if desired, using different valve operating speeds and different system configurations.

DIS 0500-01 was completed on pressure switches 3-263-55C and 3-263-55D in conjunction with SP 94-10-126. A full scram was received, as expected, during the restoration of the pressure switch (PS) 3-263-55C, due to a pressure transient resulting from the 13 psid static head from the sensing line.

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

The special test was re-entered at step I.10 to determine the effect of various methods of valving of the level instrumentation on instrument rack 2203-6. This step was completed twice, once for each pressure switch, successfully.

A discussion was held to determine which test, if any, to do next. It was decided to repeat the test using a "rapid" opening of the pressure switch isolation valves. The Test Director and the CST decided to start at step I.10.a.(10).

The test was completed with the pressure equalized across the isolation valve and rapid valve opening without producing an RPS actuation using steps I.10.a.(10) through I.10.a.(18).

Another discussion was conducted between the Instrumentation Component Engineer and the Test Director on whether or not they should repeat the test with a one pound differential pressure across the isolation valve. Following the general agreement to repeat the test, the CST opened the bypass valve on the deadweight tester to reduce the pressure. Realizing that the isolation valve was still open, the CST shut the bypass valve, producing a pressure transient in the sensing line to initiate a full reactor scram.

C. CAUSE OF EVENT:

This report is submitted in accordance with 10CFR50.73 (a)(2)(iv), which requires reporting of any event that results in automatic or manual actuation of any Engineered Safety Feature (ESF). The causes of this event are as follows:

The initial HLA briefing was inadequate (Skill Based - Mind Set). Though the procedure was written to allow some flexibility to repeat various portions of the test for the purpose of troubleshooting, at no time during the HLA was it discussed what steps were to be performed if it was decided to repeat any portions. This lack of questioning attitude resulted from confidence, based on combined experience, in the ability of the assigned individuals to complete the task without any complications.

The assigned Test Director took the role of verifier and inappropriately allowed the CST performing the evolution to control the evolution (Knowledge Based - Lack of Training/Qualification). This was the first time the IM General Supervisor had been assigned this role. No direction was provided to him during any previous training or prior to the conduct of the special test. This prevented him from directing and monitoring the actions of the various personnel and affected plant systems during the test.

The decision was made to repeat only steps I.10.a.(10) through I.10.a.(18) (Rule Based - Mind Set). This decision was made based on the general precaution in normal procedures which allows completion of different portions of a procedure without completing the entire procedure. This action was inappropriate for two reasons:

1. Stopping at this point left the instrument isolation valve open and the test equipment connected.

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2. While these steps completed the desired test, completion of only a part of the original complete step was not allowed by the procedure.

Following testing of the second pressure switch with the prescribed differential pressures, the Test Director and Instrumentation Component Engineer entered into a discussion on whether or not to repeat the test with a different differential pressure. The discussion occurred while still on the sound powered phone circuit. This lead to general confusion and prompted the CST, who had been in control of the procedure to inappropriately begin reducing pressure without direction (Rule Based - Mind Set).

D. SAFETY ANALYSIS:

The safety significance of this event is minimal because the actual reactor vessel water level did not change during the transient. The reactor trip was caused by a pressure transient on the reference leg of the reactor vessel water level transmitters resulting in a momentary low level indication.

E. CORRECTIVE ACTIONS:

The individuals involved in this event now understand the importance of maintaining a questioning attitude during HLAs to ensure all possibilities are discussed prior to completing any actions.

The individuals involved in this event now understand the need for additional attention to detail and procedural compliance during special or complex procedures.

The individuals involved in this event now understand the need to re-enforce clear communication.

The personnel involved recognize and understand the role they played in this event, and the requirement to maintain a questioning attitude at all times.

Dresden Station will review and revise as required Dresden Administrative Procedure (DAP) 09-11, Conduct of Surveillance, Special and Complex Procedures, and DAP 07-37, Conduct of Heightened Level of Awareness Activities and High Impact Activities, to clarify the role and responsibilities for personnel directing the conduct of special or complex procedures (NTS 249-180-94-020-01).

F. PREVIOUS OCCURRENCES:

None.

G. COMPONENT FAILURE DATA:

None.