

NRC FORM 366 (5-92)			U.S. NUCLEAR REGULATORY COMMISSION			APPROVED BY OMB NO. 3150-0104 EXPIRES 5/31/95				
<b>LICENSEE EVENT REPORT (LER)</b>						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) Dresden Nuclear Power Station, Unit 2				DOCKET NUMBER (2) 05000237		PAGE (3) 1 OF 6				
TITLE (4) Licensee Exceeds Technical Specification Time Clock During Calibration of 2B Main Steam Line Radiation Monitor Due to Personnel Error										
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
09	08	96	96	-- 013 --	00	10	04	96	None	
OPERATING MODE (9)		N		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)						
POWER LEVEL (10)		077		20.2201(b)		20.2203(a)(3)(i)		50.73(a)(2)(iii)		73.71(b)
				20.2203(a)(1)		20.2203(a)(3)(ii)		50.73(a)(2)(iv)		73.71(c)
				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)	X	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 Ralph M. Fenili, Operations Staff						TELEPHONE NUMBER (Include Area Code) Ext. 2917		(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)

On September 8, 1996, Instrument Maintenance (IM) personnel obtained permission to begin Dresden Instrument Surveillance (DIS) 1700-01, "Unit 2 Main Steam Line Log Radiation Monitoring System Calibration". At 1459, the 2B MSL Rad Monitor was placed in 'test' and a two hour LCO was entered per Technical Specification Table 3.1.1, Note 12. The Unit NSO made an entry into Dresden Administrative Procedure (DAP) 07-45, "Short Duration Time Clocks", to monitor the 2 hour requirement. The IM began having trouble with calibration of an alarm setpoint and left the Control Room to obtain assistance from his Supervision. The NSO became involved in other plant activities and neglected his monitoring of the time clock, resulting in it being exceeded. The primary root cause was the Unit 2 NSO's failure to adhere to the procedural requirement in DAP 07-45, monitoring of the time clock. Corrective actions include counseling of the involved individuals, a procedure change for planned surveillance performance, clarifying expectation of IM personnel actions when difficulty is encountered during the performance of any surveillance, and revision to DIS 1700-01 to provide enhanced direction to the user. The safety significance of this event was determined to be minimal.

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TEXT CONTINUATION

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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] and are obtained from IEEE Standard 805-1984, IEEE Recommendation Practice for System Identification in Nuclear Power Plants and Related Facilities.

EVENT IDENTIFICATION:

Licensee Exceeds Technical Specification Time Clock During Calibration of 2B Main Steam Line Radiation Monitor Due To Personnel Error.

A. PLANT CONDITIONS PRIOR TO EVENT:

Unit: 2                                      Event Date: September 8, 1996                      Event Time: 1715  
 Reactor Mode: N                              Mode Name: Run                                      Power Level: 77%  
 Reactor Coolant System Pressure: 969 psig

B. DESCRIPTION OF EVENT:

This report is being submitted in accordance with 10CFR50.73(a)(2)(i)(B), any operation or condition prohibited by the plant's Technical Specifications (TS). On September 8, 1996, the two hour LCO of TS Table 3.1.1, Note 12 was not met.

On September 8, 1996, Instrument Maintenance (IM) [Non-Licensed] personnel obtained permission from a different US to begin performance of Dresden Instrument Surveillance (DIS) 1700-01, "Unit 2 Main Steam Line Log Radiation Monitoring System Calibration". At 1459, the 2B MSL Rad Monitor was placed in 'test', in accordance with DIS 1700-01. A two hour LCO was entered per Technical Specification Table 3.1.1, Note 12. Dresden Administrative Procedure (DAP) 07-45, "Short Duration Time Clocks", provides administrative guidance for this activity. Entry into the short duration LCO was noted on Attachment A of DAP 07-45 by the day shift Unit 2 Nuclear Station Operator (NSO) [Licensed Reactor Operator].

At approximately 1515, shift relief occurred. The oncoming Unit 2 NSO and Unit 2 Auxiliary NSO [Licensed Reactor Operators] were both aware of the fact that the 2B MSL Rad Monitor was in test and that the 2 hour time clock was 'running'. The oncoming US and Shift Manager (SM) [Licensed Senior Reactor Operators] were aware that DIS 1700-01 was in progress, but due to a lack of detail in their shift turnovers, were unaware that a 2 hour LCO clock was 'running' for the 2B MSL Rad Monitor. Upon assuming the shift, the Unit Supervisor reviewed the unit status and ongoing activities. The US reviewed the DAP 07-45 log, recognized that a two hour LCO clock was 'running', but failed to observe the start time for the clock.

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At approximately 1615, the IM began having trouble with calibration of an alarm setpoint. The IM Technician verified his calculations, and determined that the setpoint was too low, left the Control Room to obtain assistance from IM Supervision. After some discussion, direction on completion of the calibration was provided to the IM. Operations Department personnel were not made aware of the problem with calibration of the radiation monitor.

The pre-job brief for the FW heaters began at approximately 1640 hours and involved the US, the Unit 2 Aux NSO, and two IM personnel. The focus at this time for the US and Aux NSO was the FW heater pre-job brief, not the 2B MSL Rad Monitor calibration.

At approximately 1657 hours (2 minutes before the 2 hour time clock would expire) the IM Technician approached the NSO, notifying him that the calibration problem with the 2B MSL Rad Monitor was resolved and that he would continue working toward completion of the monitor calibration. The NSO made the US aware of this fact. This was the first indication the US had on the status of the Short Duration Time Clock. The IM resumed working on the 2B MSL Rad Monitor while the Unit 2 NSO and US reviewed Technical Specifications and DAP 07-45 to determine the required actions for the short duration time clock. During this review, the 2 hour time clock was exceeded.

On September 8, 1996 at 1714 hours the IM finished the surveillance and returned the 2B MSL Rad Monitor to an operable status.

The Unit 2 NSO was aware of the DAP 7-45 procedure step (F.3) that requires him to determine the status of the surveillance test approximately one-half hour before the Short Duration Time Clock expires. Normally the NSO contacts the IM performing the test, to verify that the test will be completed within the required 2 hours. In this case, the NSO became involved in other activities and neglected his monitoring of the 2 hour time clock, resulting in his failure to contact the IM about the status of the test. The Unit NSO was focused on upcoming Feedwater (FW) heater troubleshooting and level control valve adjustments, reviewing various DOAs and DGAs related to FW heater transients. In addition, the Unit 2 Aux NSO was attending the pre-job brief for the upcoming FW heater testing. This brief took place at approximately 1640 hours. Before the Aux NSO left for the pre-job brief, he mentioned in passing to the Unit NSO that it was taking a long time to complete the calibration. The NSO agreed, and said IMD must be having some problems. It did not occur to either NSO that the Tech Spec 2 hour time limit was about to be exceeded.

When the US was notified that the 2 hour time clock was going to be exceeded, he became focused on DAP 7-45, not on the required actions of Tech Spec Table 3.1.1, Note 12. The operators felt that Technical Specifications required them to trip the channel, but the IM was ready to proceed, and the channel was needed to be in a reset condition for the calibration. When the Shift Manager was contacted it was determined that the Tech Spec requirement had been exceeded.

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C. CAUSE OF EVENT:

- C.1 The Primary Cause of the event was a cognitive personnel error (NRC Cause Code A) by the Unit 2 NSO [Licensed Reactor Operator], failing to adhere to the procedural requirement in DAP 07-45 which states, "When the Short Duration Time Clock is approximately one (1) half hour from expiring, the NSO shall determine the status of the surveillance test". Though aware of the procedural requirement, he allowed his attention to become focused on procedural reviews and failed to perform this action, which resulted in inadequate time for the Operating Team to take the required Technical Specification actions, as stated in Note 12, prior to exceeding the 2 hour time clock. There were no adverse environmental effects of the work location which contributed to the event.
- C.2 A contributing cause to the event was a Management Deficiency (NRC Cause Code E), as a weakness in the station surveillance program. Though plant impact statements were being utilized within the Work Control Process, the station did not add the process change to cover scheduled surveillance testing.
- C.3 A second contributing cause of the event was cognitive personnel error (NRC Cause Code A) by the Operating Team, because they failed to effectively control exit from the short duration time clock or take the Tech Spec required actions. The US, the Unit NSO, and the Aux NSO were all aware of the calibration in progress, and that the requirements of DAP 07-45 were in effect. They did not maintain cognizance of the calibration, and the Tech Spec requirement to complete it within 2 hours.
- C.4 The third contributing cause was identified as a defective procedure (NRC Cause code D), as the Instrument Surveillance, DIS 1700-01 failed to provide adequate direction to the less practiced user, specifically in the area of how the calculated alarm setpoint may be adjusted during calibration to achieve the MSL High Radiation Alarm (H2 Addition ON) setpoint.
- C.5 Lastly, another contributing cause as a result of Change Management, the lack of clear direction to the Instrument Maintenance Department (NRC Cause Code X) to maintain an Operating Team immediately aware of problems which occur during the performance of the surveillance, preventing the timely completion of the task. Historically, IM Supervisors did not work backshifts, with Operation's Supervision performing oversight of IM personnel executing backshift surveillances. If problems were identified during performance of surveillances, Operations would be immediately notified of the problem. As departmental restructuring occurred, IM Supervisors began working backshifts, and when problems were encountered, IM Supervision was notified of the problem first. After a discussion of the problem between the IM and his supervisor, the IM Supervisor would notify Operations of the problem and proposed resolution. With the recent implementation of the 2 hour surveillance clock, Operations needed to be immediately notified of problems encountered, thus allowing adequate time for Operations to take the required Tech Spec actions.

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D. SAFETY ANALYSIS:

The 2B Main Steam Line Radiation monitor was incapable of performing its intended function during this event, yet the "D" monitor remained operable and capable of generating the appropriate logic trip on increasing steam line radiation, even though the number of monitors per channel was minimized. If a failure had occurred which resulted in fuel damage, the logic would have performed the intended logic trip.

Recent evaluation of the Main Steam Monitoring system determined that the system is not needed since the Off-Gas Radiation Monitoring system monitors plant effluent and would provide isolation to the release path on fuel failure. Current station plans are for the elimination of the Main Steam Line Radiation Monitoring system during upcoming unit refueling outages.

Lastly, unit power remained steady during the event and no activities were being performed which could have resulted in fuel failure. For these reasons, the safety significance is considered to be minimal.

E. CORRECTIVE ACTIONS:

1. The involved Nuclear Station Operators, Shift Manager and Unit Supervisor have been held personally accountable for this event by the Operations Manager. A Team discussion was held, which centered around poor personnel performance and safety culture, from which the appropriate disciplinary actions have been taken. Each involved Team member understands his failure and agrees with the root cause. (C.1/Complete)
2. The Operations Daily Orders provided a summary of the event and identified the Operations Managers concerns regarding safety culture and job performance. Each Team member was required to sign, acknowledging their understanding of Operations Management's expectations. (C.3/Complete)
3. Revise and implement DAP 18-09, "Work Activity Screening", requiring the usage of plant impact statements for planned station surveillances to coordinate the actions to be taken upon nearing the end of a short duration time clock. (C.2/2371809601301)
4. Revise DIS 1700-01, "Unit 2 Main Steam Line Log Radiation Monitoring System Calibration", to include an example of how the calculated alarm setpoint may be adjusted during calibration to achieve MSL High Radiation Alarm (H2 Addition ON) setpoint being within tolerance. (C.4/2371809601302)

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5. Operations Staff had held an open discussion with all Instrument Maintenance personnel, during their department tailgate. This discussion covered this event, the root causes identified, and concluded with the clear expectation for IM personnel to immediately notify Operations when difficulty is encountered during the performance of any surveillance. (C.5/Complete)
6. A Training Request has been submitted to revise initial Instrument Maintenance Worker Training to provide the clear expectation to immediately notify Operations whenever difficulty is encountered during the performance of any surveillance. (C.5/Complete)

F. PREVIOUS OCCURRENCES:

LER/Docket Number/Title

96-011/05000249 Unexpected Cycling of the Low Pressure Coolant Injection Minimum Flow. Corrective actions included actions to enhance shift communications and improved procedural guidance for return to service of the system after maintenance.

G. COMPONENT FAILURE DATA:

None.