

NRC FORM 366 (4-95)	U.S. NUCLEAR REGULATORY COMMISSION	APPROVED BY OMB NO. 3150-0104 EXPIRES 04/30/98
<h2 style="margin: 0;">LICENSEE EVENT REPORT (LER)</h2>		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 INFORMATION AND 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.

FACILITY NAME (1) Dresden Nuclear Power Station, Unit 2	DOCKET NUMBER (2) 05000237	PAGE (3) 1 of 4
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TITLE (4)
Reactor Protection System Electrical Protection Assembly CHANNEL FUNCTIONAL TEST Requirement Not Met due to Inadequate Review of Test Procedure

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
02	04	99	99	002	00	03	04	99	Dresden Unit 3	05000249
									FACILITY NAME	DOCKET NUMBER
									N/A	N/A

OPERATING MODE (9) 1 (1)	POWER LEVEL (10) 099 (099)	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR § (Check one or more) (11)								
		20.2201(b)	20.2203(a)(2)(v)	<input checked="" type="checkbox"/>	50.73(a)(2)(i)	50.73(a)(2)(viii)				
		20.2203(a)(2)(i)	20.2203(a)(3)(i)		50.73(a)(2)(ii)	50.73(a)(2)(x)				
		20.405(a)(1)(ii)	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	Specify in Abstract below or in NRC Form 366A			
		20.2203(a)(2)(iii)	50.36(c)(1)		50.73(a)(2)(v)					
		20.2203(a)(2)(iv)	50.36(c)(2)		50.73(a)(2)(vii)					

LICENSEE CONTACT FOR THIS LER (12)	
NAME Mark Hanneman, System Engineer	TELEPHONE NUMBER (Include Area Code) (815) 942-2920 ext. 3210

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)		
YES <small>(If yes, complete EXPECTED SUBMISSION DATE).</small>	<input checked="" type="checkbox"/>	NO				

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

On January 31, 1999, during a routine review of vendor technical material relating to the Reactor Protection System (RPS) Electrical Protection Assembly (EPA) [ED], it was discovered that a Dresden procedure used to perform channel functional testing requirements on RPS EPAs (DTS 0500-02) used a testing methodology that did not satisfy the requirements of the Technical Specification 4.9.G.1. Technical Specification 4.9.G.1 requires a CHANNEL FUNCTIONAL TEST of the EPAs be performed when the plant is in cold shutdown for greater than 24 hours, unless it has been performed in the last 6 months.

However, Dresden also uses another procedure (DTS 0500-03) to perform EPA channel calibrations every 18 months. A review of this procedure determined its performance satisfied the requirements of the CHANNEL FUNCTIONAL TEST specified in T.S. 4.9.G.1. At the time of discovery, both Units were in compliance with T.S. 4.9.G.1 due to the satisfactory completion of DTS 0500-03. However, a review of past operating and surveillance history determined that several times in the past, the requirements of T.S. 4.9.G.1 were not met due to the use of an inadequate procedure. This report documents historical operability issues pursuant to 10 CFR 50.73(a)(2)(i)(B).

This event was the result of an inadequate review of the test procedure. Corrective actions include enhancing the review of applicable procedures to require the appropriate disciplines and reviewing similar procedures to ensure technical specification requirements are met.

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

Therefore, a review of operating and surveillance history was performed to determine if the proper channel functional test had been performed on the EPAs in accordance with Technical Specifications.

At the time of discovery, the most recently completed testing on both units' RPS EPA Logic Cards was a CHANNEL CALIBRATION. This test was performed in accordance with DTS 0500-03 and within the plant technical specifications requirements for calibration and functional testing. Therefore, this discrepancy applies only to historical operability.

Past operating experience determined that several times in the past, the requirements of T.S. 4.9.G.1 were not met due to the use of DTS 0500-02. Specifically, on January 17, 1998, at approximately 1200 hours Unit 2 entered Mode 2 from Mode 4 and did not perform a proper CHANNEL FUNCTIONAL TEST in accordance with T.S. 4.9.G.1. In addition, on April 13, 1998 at approximately 1300 hours Unit 3 entered Mode 2 from Mode 4 and did not perform a proper CHANNEL FUNCTIONAL TEST in accordance with T.S. 4.9.G.1.

A review of current procedures indicated that channel calibration and channel functional tests are typically performed using Operations or Instrument Maintenance Department procedures. These procedures are clearly identified and any revisions receive a review to ensure that all Channel Functional, Channel Calibration and Logic System Functional requirements are met.

A review of procedures that perform Channel Calibration and Channel Functional tests was conducted. Two additional procedures outside of the Operations and Instrument Maintenance procedures were identified. These procedures were reviewed to ensure compliance with technical specifications requirements.

C. CAUSE OF EVENT:

This event was caused by an inadequate review of procedure, DTS 0500-02, "Functional Testing of RPS MG Set and RPS Reserve Power Supply." (NRC Cause Code E). A review of procedure revision history documentation related to DTS 0500-02 has indicated that this procedure has existed with essentially the same methodology and limitations for verification of CHANNEL FUNCTIONAL TEST since original installation of the RPS EPA system. DTS 0500-02 was written and reviewed in accordance with station standard review requirements for Technical procedures. However, since the procedure performs a functional test of system logic, the normal barrier (independent technical review by I&C discipline) was not in place.

D. SAFETY ANALYSIS

The function of the RPS EPAs is to protect the Class 1E components powered by the RPS busses from abnormal voltage and frequency conditions resulting from failures of the non-Class 1E power supplies. Each EPA includes a breaker and associated modules, which monitor the RPS bus voltage and frequency, and trip the EPA breaker upon detection of abnormalities (overvoltage, undervoltage and underfrequency). As such, the EPAs protect components fed by the RPS system from the effects of perturbations in the power supply by removing power from the RPS bus. If any of these conditions were to occur and the EPA breakers not function, the components supplied by the RPS could fail. The RPS components are designed to fail in the safe condition (produce a half or full scram). Failure of the EPA breakers will not prevent the RPS trip logic from functioning. In addition, backup protection for RPS bus was available from the RPS Motor-Generator Set protective relays or reserve bus protective relays. This protection is not affected by the EPA breakers. Therefore, the overall safety significance of this event is minimal.

E. CORRECTIVE ACTIONS:

DTS 0500-02, "Functional Testing of RPS MG Set and RPS Reserve Power Supply" has been deleted. (Complete)

DTS 0500-03, which performs the CHANNEL CALIBRATION of the subject EPAs, has been reviewed for similar inadequacies using the latest vendor technical information as a guide. No deficiencies were detected. (Complete)

Preventative Maintenance predefines 92325 and 96899 were revised to ensure the CHANNEL FUNCTIONAL TEST

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requirements of the plant technical specifications are satisfied. (Complete)

A review of all Dresden Engineering Department Procedures and Surveillances, (DTP and DTS), by subject matter was performed to determine if any of these procedures are used to credit plant technical specification requirements for CHANNEL CALIBRATION or CHANNEL FUNCTIONAL TEST. Two additional Engineering procedures were identified which perform a CHANNEL CALIBRATION or CHANNEL FUNCTIONAL TEST.

A review of each of these procedures indicates that the procedures provide adequate guidance to ensure that plant technical specification requirements are met. (Complete)

The procedures identified will be revised to require I&C discipline review during the Independent Technical Review process. (NTS 237-180-99-00201)

F. PREVIOUS OCCURRENCES:

A review of Dresden Station LERs was performed which has indicated that no similar events with respect to inadequate procedures relating to the Reactor Protection System have been identified.

A review of Dresden Station LERs indicated one recent event related to inadequate review of procedures:

LER 2-98-016, Drywell High Radiation Monitor CHANNEL FUNCTIONAL TEST Inadequate due to Inadequate Technical Review of Procedure During TSUP Implementation

A review of corrective actions associated with this occurrence would not have prevented the event described in this report.

G. COMPONENT FAILURE DATA:

<u>Manufacturer</u>	<u>Nomenclature</u>	<u>Model/ Part Number</u>
N/A		