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Dresden Generating Station
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ComEd

December 15, 1995

PGHLTR 95-0040

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

Licensee Event Report 95-022, Docket 50-249 is being submitted pursuant to 10CFR50.73(a)(2)(ii)(B), which requires the reporting of any event or condition that results in the plant being outside of the design bases.

This correspondence contains the following commitments:

1. Reanalysis and design of reinforcement, if required, to return stresses in the steel to within UFSAR limits will be completed for the Unit 3 CRD SDV galleries (NTS: 2491809502201).

2. The Unit 2 CRD SDV galleries will be evaluated to determine if similar discrepancies exist and reinforcement designed, if required, to return stresses to within UFSAR limits (NTS: 2491809502202).

Sincerely,

Peter G. Holland

Peter G. Holland
Regulatory Assurance Supervisor

PGH/TL:pt

Enclosure

cc: H. Miller, 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

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.

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
Dresden Nuclear Power Station, Unit 3	05000249	1 OF 4

TITLE (4)
CRD SCRAM Discharge Volume Galleries Do Not Meet UFSAR Allowables Due to a Design Deficiency

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
11	17	95	95	-- 022 --	00	12	15	95	None	
									FACILITY NAME	DOCKET NUMBER

OPERATING MODE (9)	N	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)							
POWER LEVEL (10)	076		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)		50.73(a)(2)(i)		50.73(a)(2)(viii)(B)		
			20.2203(a)(2)(v)	X	50.73(a)(2)(ii)		50.73(a)(2)(x)		

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER (Include Area Code)
Timothy L. Loch, Design Engineering Ext. 3246	(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 November 17, 1995, at 1950, it was determined that the Unit 3 East and West Bank Control Rod Drive (CRD) SCRAM Discharge Volume (SDV) gallery platforms did not meet the design allowable stresses specified in the UFSAR. The engineering evaluation determined that discrepancies existed between the design drawings and the as-installed configuration of the galleries and also found modelling and design discrepancies in the design basis calculations of the galleries. An operability evaluation determined that sufficient margin exists in the CRD SDV gallery steel to maintain operability. The root cause of this event is a design configuration and analysis deficiency in that the procedures and controls in place at the time of original plant construction and at the time when the CRD SDV galleries were modified were inadequate. Corrective actions include reanalyzing the steel to remove unnecessary conservatism and adding required reinforcement to return stresses in the Unit 3 CRD SDV galleries to within UFSAR limits and determining if similar discrepancies exist in the Unit 2 CRD SDV galleries.

PLANT AND SYSTEM IDENTIFICATION:

General Electric - Boiling Water Reactor - 2527 MWt rated core thermal power.

EVENT IDENTIFICATION:

CRD SCRAM Discharge Volume Galleries Do Not Meet UFSAR Allowables Due to a Design Deficiency

A. PLANT CONDITIONS PRIOR TO EVENT:

Unit: 3 Event Date: 11/17/95 Event Time: 1950 hrs

Reactor Mode: N Mode Name: Run Power Level: 76%

Reactor Coolant System Pressure: 970 psig

B. DESCRIPTION OF EVENT:

This report is being submitted in accordance with 10CFR50.73(a)(2)(ii)(B), which requires the reporting of any event or condition that results in the plant being outside of the design bases.

On November 9, 1995, at 1200, while evaluating the Unit 3 Control Rod Drive (AA) Hydraulic Control Unit gallery platform frames (also known as Control Rod Drive (CRD) SCRAM Discharge Volume (SDV) Gallery Support Steel) for additional piping reactions from proposed permanent lead shielding on the SDV piping, discrepancies were identified between the as-built configurations of the East and West CRD SDV gallery platform frames and the configurations shown on structural drawings B-1693 (Sheets 1-4) and B-1692 (Sheets 1-4), respectively.

Shift management was informed of the issue and a Performance Improvement Form (Number: 2372009547800) was generated on 11/09/95 at 1200 to initiate investigation of the problem. Engineering personnel initiated an operability evaluation in accordance with station procedures.

On November 17, 1995, at 1950 (Central Standard Time), with Unit 3 at 76% rated core thermal power and at a reactor pressure of 970 psig, the engineering evaluation was completed (dated November 21, 1995; CHRON No. 313424) in accordance with Commonwealth Edison procedure QE-ENC-40.1 and determined that certain members and connections of the Unit 3 CRD SDV East and West Bank galleries did not meet plant design requirements as defined in the UFSAR. The NRC operations center was informed of the event on 11/17/95 at 2141 (Eastern Standard Time)

The engineering evaluation determined that discrepancies existed between the design drawings and the as-installed configuration of the galleries. The engineering evaluation also found modelling and design discrepancies in the design basis calculations of the galleries. This evaluation determined that sufficient margin exists in the CRD SDV gallery steel to maintain operability because of conservatism in the CRD SDV piping analysis and conservatism in the structural steel allowable stresses.

C. CAUSE OF EVENT:

The subject CRD SDV gallery platforms were initially installed during original plant construction utilizing original plant construction codes and design drawing M-312. The horizontal bracing members in two bays of the Unit 3 East Bank CRD SDV gallery were not installed in accordance with the drawing.

These CRD SDV gallery platforms were subsequently modified in the early 1980s (in accordance with design drawings M-1692 Sheets 1 through 4 and M-1693 Sheets 1 through 4) as a result of load increases of the CRD SDV piping (in response to IEB 79-14 and/or IEB 80-17) attached to the galleries. The design calculations for this modification did not consider the as-installed discrepancies and had modelling and design discrepancies.

The root cause of this event is a design configuration and analysis deficiency in that the procedures and controls in place at the time of original plant construction and at the time when the CRD SRV galleries were modified were inadequate.

Reanalysis of the configuration to current design standards, performed for the purpose of installing a proposed plant design change, revealed the design configuration and analysis deficiency.

D. SAFETY ANALYSIS:

The operability evaluation determined that sufficient margin exists in the CRD SDV gallery steel to maintain operability because of conservatism in the CRD SDV piping analysis and conservatism in the structural steel allowable stresses. The safety significance of this event was therefore minimal.

The safety consequences of this event would be the same under a more severe set of initial conditions because the loads and load combinations used in the engineering evaluation are for worst case conditions.

E. CORRECTIVE ACTIONS:

Procedures and controls exist today that were not in place at the time of original plant construction and at the time the CRD SRV galleries were modified. These procedures and controls give assurance that this type of event will not happen today.

An operability determination was performed and determined that sufficient margin exists in the CRD SDV gallery steel to maintain operability because of conservatism in the CRD SDV piping analysis and conservatism in the structural steel allowable stresses.

Reanalysis and design of reinforcement, if required, to return stresses in the steel to within UFSAR limits will be completed for the Unit 3 CRD SDV galleries (NTS: 2491809502201).

The Unit 2 CRD SDV galleries will be evaluated to determine if similar discrepancies exist and reinforcement designed, if required, to return stresses to within UFSAR limits (NTS: 2491809502202).

F. PREVIOUS OCCURRENCES:

None.

G. COMPONENT FAILURE DATA:

Not Applicable.