NRC Form 366
(9-83)

U.S. NUCLEAR REGULATORY COMMISSION
APPROVED OMB NO. 3150-0104
EXPIRES: 8/31/85

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
Dresden Nuclear Power Station, Unit 3	0 5 0 0 0 2 4 9	1 OF 0 6

TITLE (4) Primary Containment Structural Steel Connections Outside Final Safety Analysis Report Design Criteria Due to Apparent Original Construction Oversight

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)
									N/A	0 5 0 0 0
0 1	0 8	8 7	8 7	0 0 5	0 0	0 4	1 4	8 7	N/A	0 5 0 0 0

OPERATING MODE (9)	N	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)			
POWER LEVEL (10)	0 0 0	20.402(b)	20.405(c)	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, NRC Form 366A)
		20.405(a)(1)(iii)	50.73(a)(2)(i)	50.73(a)(2)(viii)(A)	
		20.405(a)(1)(iv)	X 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	TELEPHONE NUMBER
Robert J. Whalen Technical Staff Engineer (X-665)	AREA CODE 8 1 5 9 4 2 - 2 9 2 0

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	
B	N H	S P T	B 2 3 5	N							

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 fifteen single-space typewritten lines) (16)

On March 16, 1987 with Unit 3 in the startup mode, station personnel were notified by the Station Nuclear Engineering Department (SNED) that Unit 3 Primary Containment drywell structural steel did not meet the Final Safety Analysis Report (FSAR) design requirements due to inadequate connections found between radial and tangential beams. A review of the Unit 3 drywell structural steel had been initiated as a result of similar discrepancies found on Dresden Unit 2, which were previously reported under Licensee Event Report No. 87-003 on Docket #050237. An inspection data assessment completed on March 16, 1987 revealed that four tangential beam connections did not meet FSAR design criteria. It is believed that the as-built condition was not adequately verified with the design prints during original construction. The safety significance of this event has been considered minimal since the as-found condition of the structural steel connections was adequate to meet operability requirements under all design basis events. These deficiencies will be repaired, and a comprehensive inspection performed, during the next Unit 3 refueling outage.

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

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].

EVENT IDENTIFICATION:

Primary Containment Structural Steel Connections Outside Final Safety Analysis Report (FSAR) Design Criteria Due to Apparent Original Construction Oversight.

A. CONDITIONS PRIOR TO EVENT:

Unit: 3 Event Date: 3/16/87 Event Time: 1130 hours

Reactor Mode: N Reactor Name: Startup Power Level: 0%

B. DESCRIPTION OF EVENT:

On February 27 and 28, 1987, with Unit 3 shut down for a short maintenance outage, a limited inspection of the Unit 3 Drywell Structural Steel [NH] connections was performed by Technical Staff and Sargent and Lundy (S & L) engineering personnel. The NRC Resident Inspector accompanied the inspection team during some of this activity. This inspection was made as a result of discrepancies discovered on Dresden Unit 2 Drywell Structural Steel [NH] connections during the 1987 Unit 2 refueling outage. The scope of the Unit 3 drywell inspection consisted of a random sample of Structural Steel [NH] connections on 2 of the 5 Drywell Primary Containment elevations (elevations 515' and 537'). A total of 78 connections [NH] were inspected. Of these, 32 were found to differ from the original design drawings. Figures 1 and 2 show the inspection point locations. An inspection data assessment completed on March 16, 1987 revealed that certain of these connections were outside of the conservative FSAR design basis criteria in their as-found condition. These were the connections for tangential beams T9 (left side only), T33, T34, and T36 (right side only). Because of the deficiencies in these connections, radial beam R19 at azimuth 22° - 30' and the connection at the biological shield also do not meet the FSAR design criteria. However, analysis performed indicates that all these connections meet operability limits for all design basis events.

C. CAUSE OF EVENT:

Comprehensive review of this issue attributes the root cause of this event to be inadequate verification of the as-built configuration against the design drawings during original construction.

D. SAFETY SIGNIFICANCE OF EVENT:

The sample inspection of Unit 3 Drywell Structural Steel [NH] connections had been initiated as a result of Dresden Unit 2 Drywell Structural Steel [NH] discrepancies. As reported under Reportable Occurrence No. 87-003-01 on Docket #050237, certain Unit 2 Drywell Structural Steel [HN] connections had been found on January 8, 1987 to be in excess of FSAR design requirements. Comprehensive inspections and analysis of the as-found condition of the Unit 2 Drywell Structural Steel [NH] found that these discrepancies, although in some cases in excess of conservative FSAR design requirements, did not exceed operability criteria under any design basis events. For this reason, a sample inspection at this time of the Unit 3 Drywell Structural Steel [NH] was deemed adequate. The connections chosen for this inspection were basically those which were more prone to exceed FSAR requirements if discrepancies of a similar nature as previously noted on Unit 2 were found.

A data assessment of the Unit 3 sample inspection completed on March 16, 1987 indicated that the connections for tangential beams T9 (left side only), T33, T34 and T36 (right side only) were in excess of FSAR criteria. Because of the deficiencies in these connections, radial beam R19 at azimuth 22° - 30' and the connection at the biological shield also do not meet the highly conservative FSAR design criteria. However, analysis performed indicates that all these connections meet operability limits for all design basis events. A safety evaluation performed by the Station Nuclear Engineering Department (SNED) in accordance with 10 CFR 50.59 determined that sufficient data had been collected at this time and Unit 3 could return to service to complete its operating cycle. At the next refueling outage, a comprehensive examination of the Unit 3 Drywell Structural Steel [NH] will be performed and a repair program implemented to ensure FSAR compliance. For these reasons, the safety significance of this event is minimal.

E. CORRECTIVE ACTIONS:

A repair program has been developed to assure the drywell Structural Steel [NH] will meet the FSAR design requirements. These repairs will be completed during the next Unit 3 refueling outage. A comprehensive inspection will also be performed at this time.

It is believed that the current level of inspection would prevent a recurrence of this type under the present modification program. Dresden Administrative Procedure (DAP) 5-1, Plant Modification Program, was revised on December 4, 1986 to require the performance of a final field walkdown of the entire modification by the station cognizant engineer, using the installation documents as a reference. Furthermore, the present program requires that all modifications involving safety related load bearing supports must be dimensionally verified.

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

F. LAST PREVIOUS OCCURRENCE:

Licensee Event Report No. 87-003, under Docket No. 050237, identified a similar problem with the Dresden Unit 2 Drywell Structural Steel [NH], in which the as-built configuration of certain connections differed from the original design drawings. Repairs were performed to ensure compliance with FSAR design criteria.

G. COMPONENT FAILURE DATA:

No component failures occurred. Primary Containment structures are not included in the NPRDS reporting criteria.

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

▲ = Connection Differs From Design Configuration △ = No Deficiencies

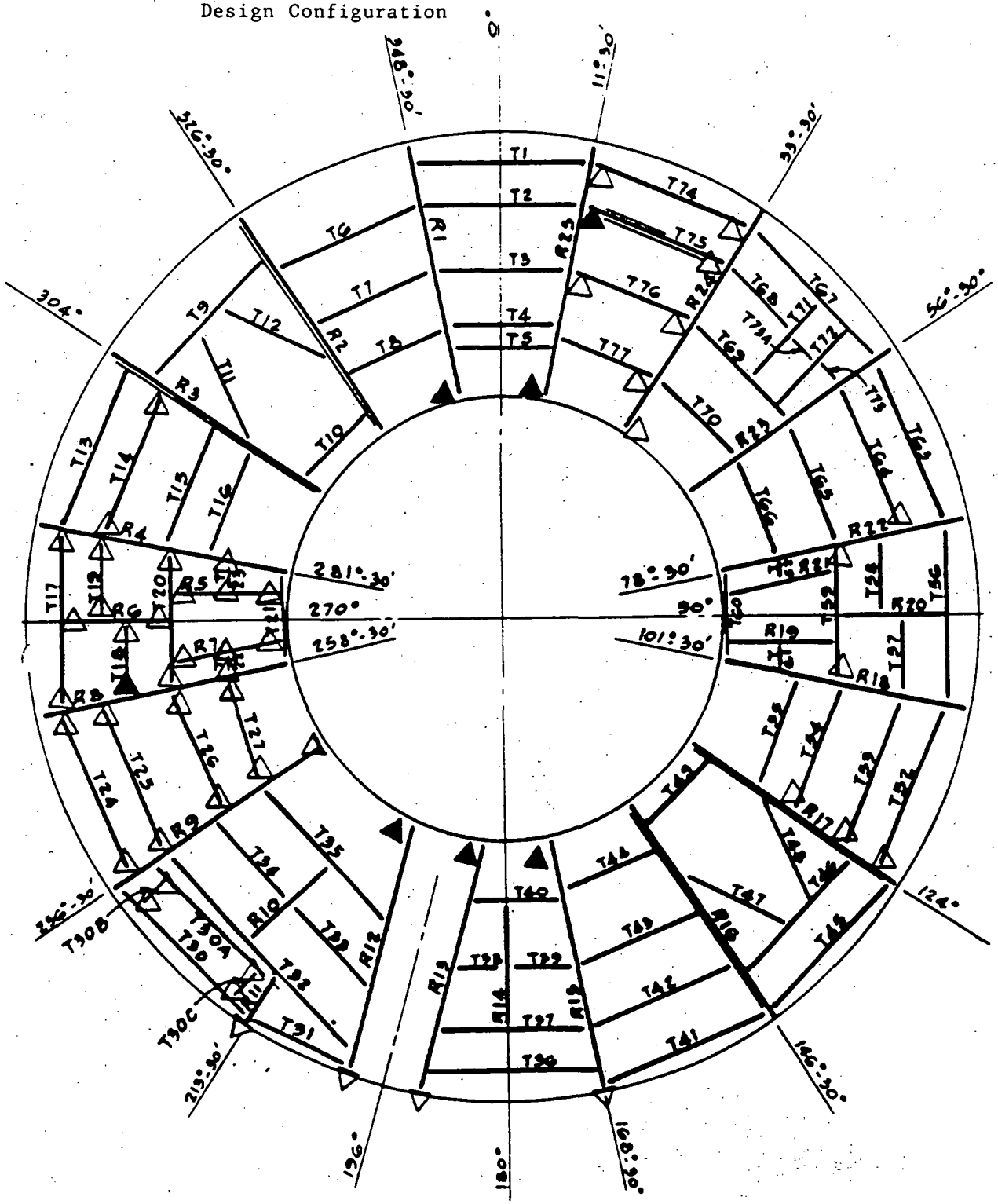

FIGURE 1

FRAMING PLAN AT EL 515'-4½"
DRESDEN UNIT 3

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TEXT *(If more space is required, use additional NRC Form 366A's)* (17)

▲ = Connection Differs From Configuration

△ = No Deficiencies

✱ = Does Not Meet FSAR

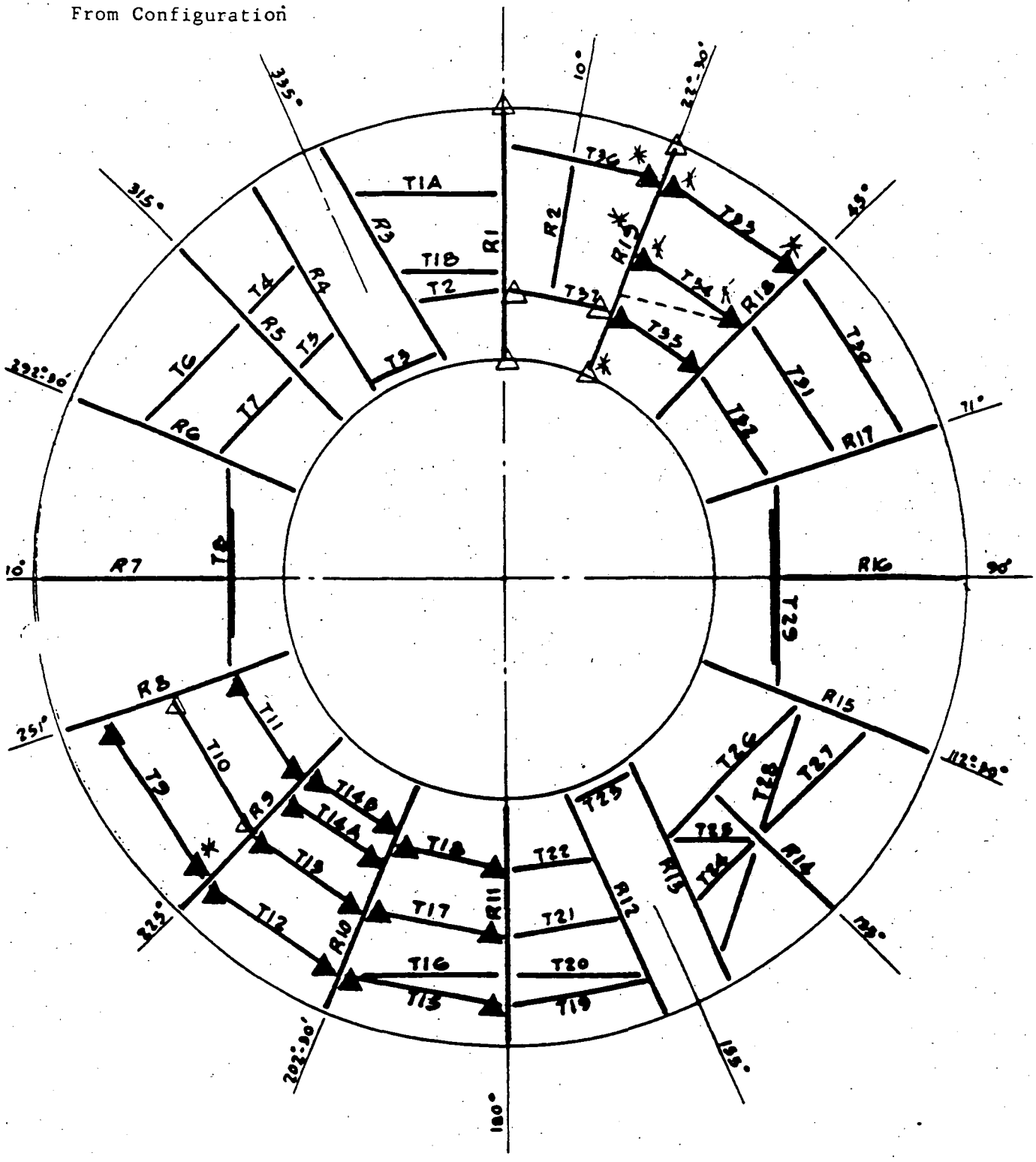

FIGURE 2

FRAMING PLAN AT EL. 597'-0"

Commonwealth Edison
Dresden Nuclear Power Station
R.R. #1
Morris, Illinois 60450
Telephone 815/942-2920

March 14, 1987

EDE LTR #87-252

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

Licensee Event Report #87-005-0, Docket #050249 is being submitted as required by Technical Specification 6.6, NUREG 1022 and 10 CFR 50.73 (a)(2)(ii).

E.D. Eenigenburg
Station Manager
Dresden Nuclear Power Station

EDE/kjl

Enclosure

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

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