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

September 1, 1991

EDE LTR: #91-549

Director, Nuclear Reactor Regulation
United States Nuclear Regulatory Commission
Washington, DC 20555

Attention: Document Control Desk

Subject: Monthly Operating Data Report
Dresden Nuclear Power Station
Commonwealth Edison Company
Docket Nos. 50-010, 50-237, and 50-249

Gentlemen:

Enclosed is the Dresden Nuclear Power Station Monthly Operating Summary Report for August, 1991. This information is supplied to your office in accordance with the instructions set forth in Regulatory Guide 1.16. Please note that the report contains information which had been previously submitted to your attention on an annual basis in accordance with 10 CFR 50.59.

Sincerely,

L. D. Eenigenburg for

E. D. Eenigenburg
Station Manager
Dresden Nuclear Power Station

EDE:DCM:ade

Enclosure

cc: U.S. NRC Region III Office
Illinois Dept. of Nuclear Safety, State of Illinois
U.S. NRC, Document Management Branch
Nuclear Licensing Administrator
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ZTECH01/8

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1/1

MONTHLY NRC

SUMMARY OF OPERATING EXPERIENCE,

CHANGES, TESTS, AND EXPERIMENTS

PER REGULATORY GUIDE 1.16 AND 10 CFR 50.59

FOR

DRESDEN NUCLEAR POWER STATION

COMMONWEALTH EDISON COMPANY

FOR AUGUST, 1991

UNIT	DOCKET	LICENSE
1	050-010	DPR-2
2	050-237	DPR-19
3	050-249	DPR-25

ZTLCH01/8/2

TABLE OF CONTENTS

1.0 Introduction

Dresden Nuclear Power Station is a three reactor generating facility owned and operated by the Commonwealth Edison Company of Chicago, Illinois. Dresden Station is located at the confluence of the Kankakee and Des Plaines Rivers, in Grundy County, near Morris, Illinois.

Dresden Unit 1 is a General Electric Boiling Water Reactor with a design net electrical output rating of 200 megawatts electrical (MWe). The unit is retired in place with all nuclear fuel removed from the reactor vessel. Therefore, no Unit 1 operating data is provided in this report.

Dresden Units 2 and 3 are General Electric Boiling Water Reactors with design net electrical output ratings of 794 MWe each.

Waste heat is rejected to a man-made cooling lake using the Kankakee River for make-up and the Illinois River for blowdown.

The Architect-Engineer for Dresden Units 2 and 3 was Sargent and Lundy of Chicago, Illinois.

This report for August, 1991 was compiled by Donald C. Maxwell of the Dresden Technical Staff, telephone number (815)942-2920 extension 2489.

2.0 SUMMARY OF OPERATING EXPERIENCE FOR AUGUST, 1991

2.1 UNIT 2 MONTHLY OPERATING EXPERIENCE SUMMARY

08-01-91 to 08-10-91 — Unit 2 entered the month on-line and operating in Economic Generation Control (EGC) at 777 MWe/Hr per the System Load Dispatcher. On 8-6-91 the 2A Reactor Recirculation Pump tripped and the Unit operated in single-loop operation until repairs were completed. Repairs to the 2A Reactor Recirculation Pump Suction Valve MO2-202-4A and Discharge Valve MO2-202-5A motor operators were required.

08-11-91 to 08-26-91 — The Unit operated at maximum loads or in Economic Generation Control (EGC) per the System Load Dispatcher until 8-25-91 at 2100 hours when an unplanned trip of the Main Turbine occurred. While performing routine turbine surveillance testing at reduced load a malfunction of the Main Turbine Thrust Bearing Wear Detector occurred. Following adjustment of the wear detector the Generator was synchronized to the system on 8-26-91 at 1110 hours.

08-26-91 to 08-30-91 — While at approximately 200 MWe, an unplanned Main Turbine trip and Reactor scram occurred at 1113 hours on 8-26-91. The Turbine trip was caused by a spurious thrust bearing wear detector actuation, attributed to excessive clearance dimensions within the wear detector assembly. The Reactor scram was attributed to a spurious Main Steam Line (MSL) low pressure trip, initiating primary containment Group I isolation and scram signals following the Turbine trip. The thrust bearing was disassembled and repaired. Further, diagnostic testing was then planned during re-start. The Reactor was brought critical on 8-30-91 at 0410 hours and the Generator was synchronized to the system at 1957 hours to perform testing, which involved performance of a turbine trip at low power while collecting data relative to MSL low pressure on high speed recorders.

08-30-91 to 08-31-91 — A Reactor scram occurred during this evolution at 2009 hours on 8-30-91. Following analysis of the data confirming the spurious MSL low pressure trips and implementation of compensatory measures, the Reactor was again brought critical at 0000 hours on 9-1-91 and the Generator was synchronized to the system at 1057 hours on the same day. Availabilty factor for the month was 80.28% and Capacity factor was 62.64%.

SUMMARY OF OPERATING EXPERIENCE FOR AUGUST, 1991

2.2 UNIT 3 MONTHLY OPERATING EXPERIENCE SUMMARY

08-01-91 to 08-19-91

Unit 3 entered the month on-line and operating at 423 MWe. The Unit operated in normal fuel depletion mode until 8-17-91 at 0116 hours when an unplanned Reactor scram occurred while performing routine surveillance testing of the Turbine Main Stop Valves (MSV). While testing the #2 MSV, a malfunction occurred such that the MSV portion of the Combined Intermediate Valves (CIV) were observed to ramp fast closed while the #2 MSV was returning to its normal open position. The Turbine crossover piping relief valves actuated. As Reactor recirculation flow was reduced in preparation for preforming a manual scram, main generator output dropped sufficiently to result in an automatic reverse power turbine/generator trip and automatic Reactor scram on MSV closure. Investigation and testing concluded that the #2 MSV was sluggish such that the emergency trip supply oil pressure dropped sufficiently during testing to result in actuation of the CIV stop valve disc dump valve, thus initiating closure of the CIV stop valves. The MSV fast acting solenoid valves were replaced.

08-20-91 to 08-31-91

The Reactor was brought critical 8-20-91 at 0920 hours and the Generator was synchronized to the system on 8-22-91 at 0045 hours. The Unit operated through the end of the month with an availability of 83.94% and a capacity factor of 38.62%.

3.0 OPERATING DATA REPORT

3.1 OPERATING DATA REPORT - UNIT TWO

DOCKET NO. 050-237
DATE September 1,1991
COMPLETED BY D. C. Maxwell
TELEPHONE (815) 942-2920

OPERATING STATUS

1. REPORTING PERIOD: August, 1991

2. CURRENTLY AUTHORIZED POWER LEVEL (MWth): 2,527 MAX DEPEND CAPACITY (MWe-Net) 772
DESIGN ELECTRICAL RATING (MWe-Net) 794

3. POWER LEVEL TO WHICH RESTRICTED (IF ANY) (MWe-Net): N/A

4. REASONS FOR RESTRICTIONS (IF ANY): N/A

		REPORTING PERIOD DATA		
		This Month	Yr-to-Date	Cumulative
5.	HOURS IN PERIOD	744	5,831	186,719
6.	TIME REACTOR CRITICAL (HOURS)	627.2	4,052.4	140,791.3
7.	TIME REACTOR RESERVE SHUTDOWN (HOURS)	0.0	0.0	0.0
8.	TIME GENERATOR ON-LINE (HOURS)	597.3	3,823.4	134,796.2
9.	TIME GENERATOR RESERVE SHUTDOWN(HOURS)	0.0	0.0	0.0
10.	THERMAL ENERGY GENERATED (MWHt-GROSS)	1,242,564	7,389,689	278,993,832
11.	ELECTRICAL ENERGY GENERATED(MWHe GROSS)	388,801	2,319,140	89,238,021
12.	ELECTRICAL ENERGY GENERATED (MWHe-NET)	364,296	2,173,520	84,238,021
13.	REACTOR SERVICE FACTOR (%)	84.3	69.5	75.4
14.	REACTOR AVAILABILITY FACTOR (%)	84.3	69.5	75.4
15.	GENERATOR SERVICE FACTOR (%)	80.3	65.6	72.2
16.	GENERATOR AVAILABILITY FACTOR (%)	80.3	65.6	72.2
17.	CAPACITY FACTOR (USING MDC) (%)	63.4	48.3	58.4
18.	CAPACITY FACTOR (USING DESIGN MWe) (%)	61.7	46.9	56.8
19.	FORCED OUTAGE FACTOR (%)	19.7	20.6	11.0

20. SHUTDOWNS SCHEDULED OVER THE NEXT 6 MONTHS
(TYPE, DATE AND DURATION OF EACH)

NONE

21. IF SHUTDOWN AT END OF REPORT PERIOD, ESTIMATED DATE OF STARTUP

09-01-91

3.0 OPERATING DATA REPORT

3.2 OPERATING DATA REPORT - UNIT THREE

DOCKET NO. 050-249
DATE September 1, 1991
COMPLETED BY D.C. Maxwell
TELEPHONE (815) 942-2920

OPERATING STATUS

1. REPORTING PERIOD: August, 1991

2. CURRENTLY AUTHORIZED POWER LEVEL (MWth): 2,527 MAX DEPEND CAPACITY (MWe-Net) 773
DESIGN ELECTRICAL RATING (MWe-Net) 794

3. POWER LEVEL TO WHICH RESTRICTED (IF ANY) (MWe-Net): N/A

4. REASONS FOR RESTRICTIONS (IF ANY): N/A

		REPORTING PERIOD DATA		
		This Month	Yr-to-Date	Cumulative
5.	HOURS IN PERIOD	744	5,831	176,304
6.	TIME REACTOR CRITICAL (HOURS)	663.9	4,518.8	129,062.5
7.	TIME REACTOR RESERVE SHUTDOWN (HOURS)	0.0	0.0	0.0
8.	TIME GENERATOR ON-LINE (HOURS)	624.5	4 452.1	124,087.6
9.	TIME GENERATOR RESERVE SHUTDOWN (HOURS)	0.0	0.0	0.0
10.	THERMAL ENERGY GENERATED (MWHt-GROSS)	827,746	7,973,908	256,323,195
11.	ELECTRICAL ENERGY GENERATED(MWHe GROSS)	239,213	2,454,033	82,608,989
12.	ELECTRICAL ENERGY GENERATED (MWHe-NET)	219,922	2,314,579	78,288,998
13.	REACTOR SERVICE FACTOR (%)	89.2	88.8	73.5
14.	REACTOR AVAILABILITY FACTOR (%)	89.2	88.8	73.5
15.	GENERATOR SERVICE FACTOR (%)	83.9	87.5	70.7
16.	GENERATOR AVAILABILITY FACTOR (%)	83.9	87.5	70.7
17.	CAPACITY FACTOR (USING MDC) (%)	38.2	58.9	57.7
18.	CAPACITY FACTOR (USING DESIGN MWe) (%)	37.2	57.3	56.2
19.	FORCED OUTAGE FACTOR (%)	16.1	2.3	11.3

20. SHUTDOWNS SCHEDULED OVER THE NEXT 6 MONTHS
(TYPE, DATE AND DURATION OF EACH)

1. Refuel Outage (D3R12) scheduled to begin September 8, 1991.

21. IF SHUTDOWN AT END OF REPORT PERIOD, ESTIMATED DATE OF STARTUP

N/A

3.3 AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 050-237

UNIT 11

DATE September 1, 1991

COMPLETED BY D. C. Maxwell

TELEPHONE 815/942-2920

MONTH AUGUST, 1991

DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)	DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
1	740	17	718
2	750	18	709
3	723	19	695
4	730	20	718
5	693	21	715
6	618	22	721
7	241	23	710
8	245	24	718
9	461	25	469
10	251	26	0
11	412	27	0
12	576	28	0
13	647	29	0
14	679	30	0
15	689	31	0
16	759		

3.4 AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 050-249

UNIT III

DATE September 1, 1991

COMPLETED BY D. C. Maxwell

TELEPHONE 815/942-2920

MONTH AUGUST, 1991

DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)	DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
1	398	17	10
2	389	18	0
3	386	19	0
4	342	20	0
5	355	21	0
6	391	22	372
7	385	23	359
8	384	24	286
9	384	25	344
10	378	26	355
11	306	27	349
12	355	28	346
13	341	29	343
14	352	30	340
15	350	31	341
16	352		

DOCKET NO. 050-237
UNIT NAME Dresden Unit II
DATE September 1, 1991
COMPLETED BY D. C. Maxwell
TELEPHONE (815)942-2920

3.5 UNIT SHUTDOWNS AND POWER REDUCTIONS

REPORT MONTH AUGUST, 1991

NO.	DATE	TYPE[1]	DURATION (HOURS)	REASON[2]	METHOD OF SHUTTING DOWN REACTOR[3]	LICENSEE EVENT REPORT #	SYSTEM CODE[4]	COMPONENT CODE[5]	CAUSE & CORRECTIVE ACTION TO PREVENT RECURRENCE
9	08-06-91	F	89.8	A	5	91-023/050237	AD,BO	RG,20	2A Recirculation Pump trip, and MO2-202-4A and MO2-202-5A operator repairs.
10	08-25-91	F	14.2	A	4 (Turbine Trip)	91-017/050237	IT	DET	Main Turbine trip due to thrust bearing wear detector problem.
11	08-26-91	F	104.7	A	3	91-024/050237	IT,SB	DET,63	Main Turbine trip from thrust bearing wear detector actuation. Subsequent Reactor scram due to spurious Group I isolation from Main Steam Line low pressure signal.
12	08-30-91	F	27.8	A	3	91-024/050237	IT,SB	DET,63	Manual Turbine trip and subsequent Reactor scram due to spurious Group I isolation from Main Steam Line low pressure signal.

1
F: Forced
S: Scheduled

2
Reason:
A-Equipment Failure (Explain)
B-Maintenance or Test
C-Refueling
D-Regulatory Restriction
E-Operator Training & Licensee Examination
F-Administrative
G-Operational Error
H-Other (Explain)

3
Method:
1-Manual
2-Manual Scram
3-Automatic Scram
4-Other (Explain)
5-Load Reduction

4
Exhibit G-Instructions for Preparation of Data Entry Sheets for Licensee Event Report (LER) File (NUREG-0161)

5 Exhibit I - Same Source

ZTECH01/8/11

DOCKET NO. 050-249
UNIT NAME Dresden Unit III
DATE September 1, 1991
COMPLETED BY D. C. Maxwell
TELEPHONE (815)942-2920

3.6 UNIT SHUTDOWNS AND POWER REDUCTIONS

REPORT MONTH AUGUST, 1991

NO.	DATE	TYPE[1]	DURATION (HOURS)	REASON[2]	METHOD OF SHUTTING DOWN REACTOR[3]	LICENSEE EVENT REPORT #	SYSTEM CODE[4]	COMPONENT CODE[5]	CAUSE & CORRECTIVE ACTION TO PREVENT RECURRENCE
2	08-17-91	F	119.5	A	3	91-006/050249	TA	XCVz	Reverse power Turbine trip and Reactor scram from Turbine Stop Valve closure following Turbine Stop Valve malfunction during testing. The fast acting solenoids for the #1 and #2 Main Stop Valves were replaced.

F: Forced
S: Scheduled

2 Reason:
A-Equipment Failure (Explain)
B-Maintenance or Test
C-Refueling
D-Regulatory Restriction
E-Operator Training & Licensee Examination
F-Administrative
G-Operational Error
H-Other (Explain)

3 Method:
1-Manual
2-Manual Scram
3-Automatic Scram
4-Other (Explain)
5-Load Reduction

4 Exhibit G-Instructions for Preparation of Data Entry Sheets for Licensee Event Report (LER) File (NUREG-0161)

5 Exhibit I - Same Source

3.7 COMMONWEALTH EDISON COMPANY - DRESDEN NUCLEAR POWER STATION
MAXIMUM DAILY ELECTRICAL LOAD FORM
FOR THE MONTH OF AUGUST, 1991

Day	Hour Ending	kWe
1	0100	1,219,800
2	1100	1,214,200
3	0100	1,197,700
4	1500	1,206,500
5	1600	1,231,900
6	0100	1,195,200
7	0900	747,500
8	1900	804,200
9	1700	976,300
10	0100	821,200
11	2200	940,600
12	1100	1,093,800
13	2300	1,182,400
14	1900	1,162,000
15	2300	1,195,100
16	1200	1,195,700
17	0100	1,089,800
18	2100	755,600
19	1300	774,500
20	0100	763,200
21	2300	761,700
22	1100	1,251,200
23	0100	1,153,700
24	1800	1,074,000
25	1400	1,099,500
26	0100	400,500
27	0100	379,100
28	0400	377,600
29	0900	375,000
30	0200	398,400
31	0700	369,100

ZTEC401/8/13

4.0 UNIQUE REPORTING REQUIREMENTS

4.1 MAIN STEAM RELIEF VALVE OPERATIONS

Relief valve operations during the reporting period, August, 1991, are summarized in the following table. The table includes information as to which relief valve was actuated, how it was actuated, and the circumstances resulting in its actuation.

Unit	Date	Valves Actuated	No. and Type of Actuations	Plant Conditions	Description of Events
2	No Unit 2 Main Steam Relief and/or Safety Valve actuations occurred during this reporting period.				
3	No Unit 3 Main Steam Relief and/or Safety Valve actuations occurred during this reporting period.				

4.2 OFF-SITE DOSE CALCULATION MANUAL (ODCM) CHANGES

No ODCM changes were reported for the month of August, 1991.

4.3 MAJOR CHANGES TO THE RADIOACTIVE WASTE TREATMENT SYSTEMS DURING AUGUST, 1991

Current Status of Radioactive Waste Treatment System Upgrade Project:

The 2/3 Radwaste Tank Room pipe replacement is 95% complete with eight pipe runs remaining to be installed. Work continues on pipe replacement in the Pump Aisle and the Precoat Area Sample Sink replacement will begin in late September. Two Sump Pump Run Timer Modifications remain to be installed and tested. The new Reactor Building Equipment Drain Tank Level Recorder modification is installed, but still requires testing. The Fire Protection System in the Radwaste Access Building is ready for testing upon resolution of test performance requirements.

4.4 FAILED FUEL ELEMENT INDICATIONS

4.4.1 Unit 2

Dresden Unit 2 fuel performance during August, 1991 continued to show no indications of leaking fuel. This is based on the sum of the activities of the six noble gases as measured at the recombiner. Unit 2 had excellent fuel performance.

4.4.2 Unit 3

Dresden Unit 3 fuel performance during August, 1991 continued to show no indications of leaking fuel. This is based on the sum of the activities of the six noble gases as measured at the recombiner. Unit 3 had excellent fuel performance.

5.0 PLANT OR PROCEDURE CHANGES, TESTS, EXPERIMENTS, AND SAFETY RELATED MAINTENANCE

5.1 Amendments to Facility License or Technical Specifications.

The license amendments and/or Technical Specification (TS)changes which were approved and implemented for use during the reporting period are listed below:

5.1.1 No new amendments to Unit 2 were approved for use during August, 1991.

5.1.2 Unit 3 Amendment 110, dated August 05, 1991

This amendment revises the Minimum Critical Power Ratio (MCPR) Safety Limit (TS 1.1.A) to 1.08 from the previous value of 1.05. This new value adds the additional margin required to mimimize the occurrence of fuel channel bow during transients that may challenge the MCPR safety limit. Also included in this amendment are the addition of 3 new calculational methodologies to Section 6.6.A.4. (Required Reports). These procedures were recently approved by the NRC Staff and are used to determine Unit 3 core operating limits. Generic Letter 88-16 requires any procedure or computer code (program) used to determine core operating limits to be listed as a reference in the appropriate section of the Technical Specifications. Specific changes are shown on pages 1/2.1-1 and 6-19. The changes identified in this amendment become effective prior to start-up of Unit 3 for operation for Cycle 13.

5.2 Changes to Procedures Which are Described in the FSAR (Units 2 and 3) during August, 1991.

Table 5.2.1, attached, summarizes the procedures described in the FSAR which were approved for use during this reporting period.

TABLE 5.2.1

CHANGES TO PROCEDURES WHICH ARE DESCRIBED IN THE FSAR (UNITS 2 AND 3) FOR AUGUST, 1991

PROCEDURE TYPE	PROCEDURE NO.	PROCEDURE TITLE/DESCRIPTION	SUMMARY OF CHANGES
Dresden Administrative Procedures	DAP 07-01	Operations Department Organization	2
	DAP 07-02	Conduct of Shift Operations	2
	DAP 12-07	Dresden Station ALARA Program	1
Dresden Operating Surveillance Procedures	DOS 1400-02	Core Spray System Valve Operability Check	1
	DOS 2300-03	High Pressure Coolant Injection System Operability Verification	1
	DOS 6600-01	Diesel Generator Surveillance Tests	2,4

NOTES:
1. Administrative change; intent of procedure unchanged.
2. Changed for clarification, intent of procedure unchanged.
3. Changed to incorporate requirements for new equipment; intent of procedure unchanged
4. Changed to implement improved testing/calibration methodology; intent of procedure unchanged.

5.3 Significant tests and experiments not described in the FSAR (Units 2 & 3)

Siguificant special procedures involving tests not described in the FSAR which were approved during the month of August, 1991 are listed below:

SP 91-07-79 UNIT ' FUEL POOL VACUUMING TO A LINER

The purpose of this procedure was to detail the steps necessary to vacuum the Unit 1 Fuel Pool into a Chem Nuclear liner.

SP 91-08-83 DIESEL GENERATOR UNDERFREQUENCY RELAY TRIP CHECK

The purpose of this procedure was to verify: (1) During a non-auto start condition of the Diesel Generator, the underfrequency relay will trip the output breaker during an underfrequency condition. (2) During an auto-start of the Diesel Generator, the underfrequency trip is inhibited.

SP 91-08-89 TESTING OF 2-202-5A AND 2-202-5B VALVES

The purpose of this procedure was to provide instructions to troubleshoot and test the Reactor Recirculation Pump Discharge Valves 2-202-5A and 2-202-5B, as part of the corrective actions related to failure of these valve operators.

SP 91-08-95 STANDBY GAS TREATMENT AND REACTOR BUILDING VENTILATION AIR OPERATED VALVES LOSS OF SUPPLY AIR PRESSURE SWITCH SETPOINT CHECK

The purpose of this procedure was to provide instructions to check Low Air Supply Pressure Switch setpoints for the Reactor Building Ventilation Inlet and Outlet Isolation Dampers 2(3)-5741A, 2(3)-5741B and 2(3)-5742A, 2(3)-5742B, and Standby Gas Treatment Flow Control Air Operated Valves 2/3-7510A and 2/3 7510B.

SP 91-08-96 PRESSURE SUPPRESSION AIR OPERATED VALVES LOSS OF SUPPLY AIR PRESSURE SWITCH SETPOINT CHECK

The purpose of this procedure was to: (1) Provide instructions to check Low Air Supply Pressure Switches trip setpoint for various Unit 2 and Unit 3 Drywell and Pressure Suppression Chamber Vent and Purge System Air Operated Valves. (2) To functionally test the Pressure Suppression Chamber Air-Operated Valves to assure movement to the "Fail-Safe" position with no oscillation upon loss of supply air. (3) To check operation of Position Indicating Lights, operation of related Digital Computer Points and Valve Off-Normal Annunciation Alarms.

5.4 Safety Related Maintenance (Unit 2 and 3)

Safety related maintenance activities for August, 1991 are summarized in the attached tables.

DRESDEN UNIT 3
SAFETY RELATED MAINTENANCE

EQUIPMENT	NATURE OF MAINTENANCE	LER OR OUTAGE NUMBER	MALFUNCTION CAUSE	MALFUNCTION RESULT	CORRECTIVE ACTION
3-2330-120 HPCI RELAY	PREVENTIVE WR D01713	N/A	---------	---------	FOUND RELAY CONTACTS BAD. REPLACED BURNED UP RELAY WITH A NEW ONE.
3-1601-61 TORUS VENT VALVE	PREVENTIVE WR D02095	N/A	---------	---------	REMOVED OLD SPEED CONTROL VALVE AND INSTALLED NEW SPEED CONTROL VLV. TIGHTENED ALL FITTINGS, ADJUSTED TIMING. TIMING ACCEPTABLE TO SCRE AND NSO.
PT 3-1641-102 TORUS PRESSURE TRANSMITTER FOR PRIMARY CONTAINMENT LEVEL	PREVENTIVE WR D02171	N/A	---------	---------	REMOVED TRANSMITTER COVER, INSTALLED NEW TRANSMITTER, COMPLETED CALIBRATION. VERIFIED PROPER CONTROL ROOM INDICATION AFTER TRANSMITTER CALIBRATION.
3-2452B D3 'B' H2/O2 MONITOR	PREVENTIVE WR D02298	N/A	---------	---------	REPAIRED BAD FLOWS BY REPLACING R1, PCV1, PCV2, PCV3, PCV4. REPAIRED LEAKING FI-1 BY REPLACING O-RINGS, REPLACED HOT BOX TEMP SWITCH. DID LEAK CHECK, CALIBRATED.
3-7838-1E2 3A CORE SPRAY PUMP DOWNSTREAM INJECTION VALVE BRK	PREVENTIVE WR D02423	N/A	---------	---------	BYPASSED OVERLOAD PER TEMPORARY ALT. PERFORMED SIGNATURE.
3-7838-1E1 3A CORE SPRAY PUMP UPSTREAM INJECTION VALVE BRK	PREVENTIVE WR D02424	N/A	---------	---------	BYPASSED OVERLOAD PER PRINT 3681A REV. N. RE-INSTALLED BUCKET INTO CUBICLE AND PERFORMED A SIGNATURE.
3-1705-11 U3 MN STM LINE RAD RECORDER	CORRECTIVE WR D02607	N/A	---------	---------	TIGHTENED PEN CARRIAGE SCREW AND DE-TORQUED SWITCH. CALIBRATED PER DIS 1700-5.
3-2301-45 HPCI TURBINE EXHAUST CHECK VLV	PREVENTIVE WR D83971	N/A	---------	---------	REMOVED EXISTING CHECK VALVE & INSTALLED NEW CHECK VALVE AND GASKETS. TORQUED BOLTS TO 530 FT/LBS. LLR TEST SHOWED NO LEAKAGE ON NEW VALVE.
D/W PERSONNEL INTERLOCK	PREVENTIVE WR D97458	N/A	---------	---------	INSTALLED STRONGBACK AND CONTACTED TECH STAFF FOR LLRT. LLRT PASSED. REMOVED STRONGBACK AND STORED IN PROPER STORAGE AREA.
HM-3-2253-81B H2/O2 ANALYZER (COMSIP/DELPHI) "B" SYS	PREVENTIVE WR D99248	N/A	---------	---------	DRILLED TWO 1/4" WEEP HOLES IN THE BOTTOM OF EQ JUNCTION BOX 3RB195, INSTALLED NEW GASKET ON DOOR. VERIFIED NO WIRES WERE DAMAGED DURING DRILLING.

DRESDEN UNIT 2
SAFETY RELATED MAINTENANCE

EQUIPMENT	NATURE OF MAINTENANCE	LER OR OUTAGE NUMBER	MALFUNCTION CAUSE	MALFUNCTION RESULT	CORRECTIVE ACTION
2-8302A-I02 D2 MOV 2-1001-4B 250VDC BUS BKR	PREVENTIVE WR D01842	N/A	---------	---------	INSPECTED AND CLEANED CONTACTOR/BREAKER ASSEMBLY PER DES 8300-02, BRIDGE & MEGGERED, DID NOT HAVE TO REPLACE ANY PARTS.
TR2-1641-200B TORUS TEMP. RECORDER	CORRECTIVE WR D02315	N/A	---------	---------	CLEANED SELECTOR SWITCH AND PRINT HEAD GUIDE ASSEMBLY. ADJUSTED AMP. GAIN AND CHECKED CALIBRATION PER DATA CARD.
AO 2-220-44	CORRECTIVE WR D02408	N/A	---------	---------	LAPPED SEATING AREA & TOOK A LIGHT MACHINE CUT ON PLUG. REPLACED SPRING & DIAPHRAGM IN OPERATOR. REASSEMBLED VLV USING A NEW GASKET. LLR TESTS DONE.
2-2323-1"-LX D2 HPCI DRAIN LINE TO CONDENSER	CORRECTIVE WR D02413	N/A	---------	---------	REMOVED INSULATION AND CLAMP, CUT OUT SECTION OF PIPE AND WELDED IN NEW ELBOW, COUPLINGS AND PIPE.
2-305-102-22-11 D-2 ACCUM 22-11	PREVENTIVE WR D90662	N/A	---------	---------	BEFORE PT OF 3/4 PIPING WHERE LINE WAS TO BE FROZEN, LINEAR INDICATIONS WERE FOUND. OLD VALVE & BAD PIPING WERE CUT OUT AND NEW VALVE AND PIPING WELDED IN.
2-1641-102 PRIMARY CONTAINMENT WATER LEVEL	PREVENTIVE WR D99152	N/A	---------	---------	PERFORMED CALIBRATION ON NEW ROSEMOUNT TRANSMITTER. REPLACED TRANSMITTER IN FIELD WITH NEW TRANSMITTER AND VERIFIED CALIBRATION.

DRESDEN UNIT 2/3
SAFETY RELATED MAINTENANCE

EQUIPMENT	NATURE OF MAINTENANCE	LER OR OUTAGE NUMBER	MALFUNCTION CAUSE	MALFUNCTION RESULT	CORRECTIVE ACTION
SBGT TRAIN B FLOW CONTROL VALVE 7510B	PREVENTIVE WR 000593	N/A	---------	---------	FABRICATED A SUPPORT TO HOLD A VERSA - VALVE FOR A TEMP. ALT. TECH STAFF DID A TEST ON THE SYSTEM. TEST PASSED AND SUPPORT WAS REMOVED.

5.5 Completed Safety Related Modifications (Units 2 and 3)

Only modifications which have been completely closed during August, 1991 are listed; modifications which are authorized for use but not completely closed will be reported based on the date of their final closure. For ease of reference, the changes have been identified by their design change control modification number.

Modification No.	Description
M12-2-84-069	This modification was performed to replace the existing Main Generator Westinghouse CVE Synchrocheck Relay with a C.E.Co Operating Analysis Department designed, tested, and fabricated HACR-1V Relay which is effective in preventing the closing of the generator to the electrical power grid out-of-phase by providing better synchronizing control of the generator. The safety evaluation concluded that the margin of safety is not reduced.
M12-2-86-002	This modification was completed to up-grade old equipment and add new equipment that makes up the existing Low Pressure Coolant Injection (LPCI) and Containment Cooling Service Water (CCSW) flow indication loops. The changes included replacing the existing full range transmitters with Rosemount 1153 transmitters, replacement of square root extractors for the LPCI System, the addition of low flow Rosemount transmitters, replacement of Indicators with Versatile Measuring Instruments, Inc. dual indicators and modification of the power supplies on Main Control Room Panels 903-19A, 903-19B. The safety evaluation concluded that the margin of safety is not reduced.
M12-2-87-054	This modification installed a new restricting orifice type flow element, root valves, and a local flow indicator in the Unit 2 Diesel Generator Cooling Water Pump discharge line to enhance measurement of cooling water flow to the cooler. The safety evaluation concluded that the margin of safety is not reduced.
M12-2-88-046	This modification to the Drywell Radiation Monitors disconnected and re-terminated four control cables that place contacts from radiation monitors 2419A and 2419B into Primary Containment Isolation System Group II logic channels to provide separation between Division I and Division II logic channels. The safety evaluation concluded that the margin of safety was not reduced.
M12-2-89-004C	This partial modification to the Reactor Vessel Level Instrumentation System (RVLIS) was completed to support implementation of Modification M12-2-89-004A. The changes included installing a new containment penetration X-209 and up-grading the existing spare penetration X-108B to facilitate the RVLIS upgrade during the D2R13 Refuel Outage. The safety evaluation concluded that the margin of safety is not reduced.

5.5 Completed Safety Related Modifications (Units 2 and 3) (Continued)

M12-2-89-053 This modification revised the control logic of the Low Pressure Coolant Injection (LPCI) Swing Motor Control Center (MCC) 28-7/29-7 by adding protective relays. This was done to ensure that auto-transfer of the Swing MCC connected to Diesel Generator #2 will perform properly when fluctuation in voltage or frequency may occur. The safety evaluation concluded that the margin of safety is not reduced.

M12-2-90-013A This modification installed alternate 125 Vdc batteries for Unit 2, which powered the unit while the scheduled permanent battery performance test was accomplished during the D2R12 Refueling Outage. The batteries, which were installed in the Unit 1 HPCI Bldg. will be maintained for future use. The safety evaluation concluded that the margin of safety is not reduced.

M12-2-90-015 This modification re-supported Unit 2 Reactor Drain Lines 2-1265-2"-A and 2-0207-2"-L to enhance the safety margin of the FSAR seismic support limitations. This was accomplished by adding two new supports, deleting two supports, and modifying one support. The safety evaluation concluded that the margin of safety is not reduced.

M12-2-91-001 This modification replaced the 2A Recirculation Pump rotating elements, covers and hydrostatic bearing components. These replacement items enhance the lifetime and facilitate maintenance and inspection of the pump. The safety evaluation concluded that the margin of safety is not reduced.

M12-2/3-86-014 This modification installed a new sloping concrete floor over the existing floor in the Waste Collector Tank Room and core-bored a hole through the wall to the pump room at floor level. A stainless steel pipe was installed through the wall from the collector tank room to the sump in the pump room to take the place of the unuseable floor drains. The safety evaluation concluded that the margin of safety is not reduced.

M12-2/3-87-002AJ This partial modification provided connections and placed into service a run timer and indicating lights to monitor the Unit 3 Drywell Floor Drain Sump Pump B at Radwaste Control Panel 2223-4. These devices are wired in parallel with an existing run timer and indicating lights in the Reactor Building. The safety evaluation concluded that the margin of safety is not reduced.

5.5 Completed Safety Related Modifications (Units 2 and 3) (Continued)

M12-2/3-87-002AK This partial modification provided connections and placed into service a run timer and indicating lights to monitor the Unit 3 Drywell Equipment Drain Sump Pump A at Radwaste Control Panel 2223-4. These devices are wired in parallel with an existing run timer and indicating lights in the Reactor Building. The safety evaluation concluded that the margin of safety is not reduced.

M12-2/3-087-002V This partial modification provided connections and placed into service run timers and indicating lights to monitor the Unit 2 Reactor Building Floor Drain Sump Pumps A and C at Radwaste Control Panel 2223-4. These devices are wired in parallel with existing run timers and indicating lights in the Reactor Building. The safety evaluation concluded that the margin of safety is not reduced.

M12-2/3-087-002W This partial modification provided connections and placed into service run timers and indicating lights to monitor the Unit 2 Reactor Building Floor Drain Sump Pumps B and D at Radwaste Control Panel 2223-4. These devices are wired in parallel with existing run timers and indicating lights in the Reactor Building. The safety evaluation concluded that the margin of safety is not reduced.

M12-2/3-87-002Z This partial modification provided connections and placed into service a run timer and indicating lights to monitor the Unit 2 Drywell Equipment Drain Sump Pump A at the Radwaste Control Panel 2223-4. These devices are wired in parallel with existing an existing run timer and indicating lights in the Reactor Building. The safety evaluation concluded that the margin of safety is not reduced.

M12-2/3-90-18 This modification re-routed the Unit 2/3 Diesel Generator Cooling Water Pump discharge piping and added two feet of four inch piping, eight feet of six inch piping and twelve feet of the eight inch piping to allow a straight horizontal run of pipe of at least five diameters between the pump discharge and the check valve. Existing check valves were replaced with dual plate check valves to minimize system pressure drop and improve flow characteristics. The safety evaluation concluded that the margin of safety is not reduced.

M12-3-85-073 This modification replaced the tubes in the Low Pressure Coolant Injection (LPCI) Heat Exchanger 3-1501-3B. The old CuNi tubes were pitting and corrosion was occurring when stagnant water conditions were present. The new tubes are Allegheny-Ludlum AL-6XN material, which is acceptable per ASME. The safety evaluation concluded that the margin of safety is not reduced.

5.5 Completed Safety Related Modifications (Units 2 and 3) (Continued)

M12-3-86-024F — This partial modification replaced the existing GE-MAC Containment Nitrogen Inerting Pressure Indicating Controller on Main Control Room Panel 903-3 with a new Yogogawa Controller which was properly labeled and complies with human factors requirements. The safety evaluation concluded that the margin of safety was not reduced.

M12-3-87-037 — This modification replaced the Isolation Condenser Relays 595-115C and 595-115D. The GE CR2820 relays were replaced with Agastat Electropneumatic 7000 Series time delay relays to increase the reliability of the time delay which prevents spurious isolation of the Group V valves and valves 3-1301-17 and 3-1301-20, and still allow these valves to isolate in the unlikely event of a line break. The safety evaluation concluded that the margin of safety is not reduced.

M12-3-88-054 — This modification installed vents in the shell side of the Low Pressure Coolant Injection (LPCI) Heat Exchanger 3-1501-3A and 3-1501 3B. These vents provide a more convenient means of bleeding air from the heat exchanger. The safety evaluation concluded that the margin of safety is not reduced.

M12-3-89-024 — This modification relocated Drywell Thermocouple 3-5741-15B approximately 30' from its prior location to the 12' degree azimuth , at elevation 539', and also provided seismic mounting for Thermocouples T/C 3-5741-11E, T/C 3-5741-15B, and T/C 3-5741-16C. The safety evaluation concluded that the margin of safety is not reduced.

M12-3-89-053 — This modification revised the control logic of the Low Pressure Coolant Injection (LPCI) Swing Motor Control Center (MCC) 38-7/39-7 by adding protective relays. This was done to ensure that auto-transfer of the Swing MCC connected to Diesel Generator #3 will perform properly when fluctuation in voltage or frequency may occur.

5.6 Temporary System Alterations Installed (Unit 2 and Unit 3)

A "Temporary System Alteration" refers to electrical jumpers, lifted leads, removed fuses, fuses turned to non-conducting position, fuses moved from normal to reserve holder, temporary power supplies, test switches in alternate positions, temporary blank flanges, and spool pieces. Alterations controlled and documented as part of a routine out-of-service or other procedure, alterations which are a normal feature of system design, and hoses installed as part of a venting or draining process are not included.

5.6.1 Unit 2 August, 1991

Temporary System Alteration No.	Description	Installation Date	Removal Date
II-31-91	This temporary alteration installed a corrosion coupon rack on the Unit 2 Reactor Building Closed Cooling Water (RBCCW) System to the east of the heat exchangers. This was done to establish the adequacy of the RBCCW Chemical Treatment Program. This installation will not negatively impact RBCCW or related equipment.	08-13-91	6 months
II-33-91	This temporary alteration installed a section of hose from pipe 2-5513-3"-M to pipe 2/3-1223-8"-M in the 2/3 Radioactive Waste Tank Room to facilitate installation of new pipes 2-5513-3"-M and 3-5513-3"-M that will be installed per Modification M12-2/3-87-028.	08-01-91	2 Months
II-34-91	This temporary alteration installed a pressure transducer, a demodulator, a chart recorder and associated equipment to the vent line of the 2-261-30C Main Steam Line Low Pressure Switch to monitor pressure surges within the sensing lines.	08-30-91	2 Days

Temporary System Installation No.	Description	Installation Date	Removal Date
III-15-91	This temporary alteration installed Environmentally Qualified (EQ) sealants and Raychem splices on Main Steam Line Radiation Detectors 3-1734-B and 3-1734-D connectors in the X-Area. This was done as part of routine maintenance activity because the original waterproofing kit is not available at this time.	08-19-91	1 Month