

MONTHLY NRC
SUMMARY OF OPERATING EXPERIENCE,
CHANGES, TESTS, AND EXPERIMENTS
PER REGULATORY GUIDE 1.1.6 AND 10 CFR 50.59
FOR
DRESDEN NUCLEAR POWER STATION
COMMONWEALTH EDISON COMPANY

<u>UNIT</u>	<u>DOCKET</u>	<u>LICENSE</u>
1	050-010	DPR-2
2	050-237	DPR-19
3	050-249	DPR-25

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Commonwealth Edison

Dresden Nuclear Power Station

R.R. #1

Morris, Illinois 60450

Telephone 815/942-2920

March 1, 1989

EDE LTR: #89-228

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. 50-237 and 50-249

Gentlemen:

Enclosed is the Dresden Nuclear Power Station Monthly Operating Summary Report for February 1989. This information is supplied to your office in accordance with the instructions set forth in Regulatory Guide 1.16. Please note that the report format has been restructured in order to provide a more comprehensive data base. Beginning with the January, 1989 report, the information which had been previously submitted to your attention on an annual basis in accordance with 10CFR50.59 is being included on a monthly basis as part of the monthly summary report. In this manner, the 10CFR50.59 reporting information (including descriptions of facility changes, tests and experiments) will be submitted in a more timely manner.

Sincerely,

E. D. Eenigenburg
Station Manager
Dresden Nuclear Power Station

EDE:GP:jmt

Enclosure

cc: Region III, Regulatory Operations, U.S. NRC
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File/NRC Op. Data
File/Numerical

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1.0 Introduction

The Dresden Nuclear Power Station is three-unit facility owned by Commonwealth Edison Company and located near Morris, Illinois. Unit 1, a General Electric Boiling Water Reactor with a design net electrical output rating of 200 megawatts electrical (MWe), is retired with all fuel removed from the reactor vessel. Therefore, no Unit 1 operating data is provided within this report. Units 2 and 3 utilize General Electric Boiling Water Reactors and have an initial design net electrical output rating of 794 MWe. 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 the Dresden Units was Sargent and Lundy.

This report was compiled by Gerrine Paramore of the Technical Staff, telephone number (815)942-2920 extension 2364.

2.0 SUMMARY OF OPERATING EXPERIENCE FOR FEBRUARY, 1989

2.1 UNIT 2 MONTHLY OPERATING EXPERIENCE SUMMARY

02-01-89 to 02-21-89 Unit 2 completed its eleventh scheduled refueling outage on February 21, 1989.

On February 19, 1989 at 1820 hours, the reactor was made critical and the generator was synchronized to the grid at 1300 hours on February 21, 1989.

02-21-89 to 02-22-89 On February 21, 1989 at 1800 hours, the Dresden Unit 2 main turbine was tripped in order to perform additional balancing.

The Unit was then brought to hot standby conditions. After completion of the turbine balancing work, the generator was again synchronized to the grid at 1840 hours on February 22, 1989.

02-23-89 to 02-28-89 For the remainder of the month, Unit 2 remained on line and operated as directed by the Load Dispatcher for the remainder of the month.

2.0 SUMMARY OF OPERATING EXPERIENCE FOR FEBRUARY, 1989

2.2 UNIT 3 MONTHLY OPERATING EXPERIENCE SUMMARY

02-01-89 to 02-28-89

Unit 3 entered the month operating at approximately 808 MWe. The Unit operated in Economic Generation Control or as directed by the Load Dispatcher for the remainder of the month.

3.1 OPERATING DATA REPORT- UNIT TWO

OPERATING DATA STATISTICS

DOCKET NO. 050-237
 UNIT DRESDEN TWO
 DATE March 1, 1989
 COMPLETED BY G.M. PARAMORE
 TELEPHONE (815)-942-2920

OPERATING STATUS

- | | | | |
|--|---------------|------------------------------------|-----|
| 1. REPORTING PERIOD: | February 1989 | GROSS HOURS IN REPORTING PERIOD: | 672 |
| 2. CURRENTLY AUTHORIZED POWER LEVEL (Mwt): | 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 RESTRICTION (IF ANY): | n/a | | |

REPORTING PERIOD DATA

	THIS MONTH	YEAR-TO-DATE	CUMULATIVE
5. TIME REACTOR CRITICAL (HOURS)	221.6	221.6	123,767.5
6. TIME REACTOR RESERVE SHUTDOWN (HOURS)	0.0	0.0	0.0
7. TIME GENERATOR ON-LINE (HOURS)	154.3	154.3	118,179.7
8. TIME GENERATOR RESERVE SHUTDOWN (HOURS)	0.0	0.0	0.0
9. THERMAL ENERGY GENERATED (MMwt-Gross)	197,457	197,457	242,689,319
10. ELECTRICAL ENERGY GENERATED (MWe-Gross)	60,476	60,476	77,545,209
11. ELECTRICAL ENERGY GENERATED (MWe-Net)	53,372	50,762	73,293,668
12. REACTOR SERVICE FACTOR (%)	33.0	15.6	75.1
13. REACTOR AVAILABILITY FACTOR (%)	33.0	15.6	75.1
14. SERVICE FACTOR (%)	23.0	10.9	71.7
15. AVAILABILITY FACTOR (%)	23.0	10.9	71.7
16. CAPACITY FACTOR (USING MDC) (%)	10.3	4.6	57.6
17. CAPACITY FACTOR (USING DESIGN MWe) (%)	10.0	4.5	56.0
18. FORCED OUTAGE FACTOR (%)	13.8	13.8	11.3

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

n/a

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

February 21, 1989

3.2 OPERATING DATA REPORT- UNIT THREE

OPERATING DATA STATISTICS

DOCKET NO. 050-249
 UNIT DRESDEN THREE
 DATE March 1, 1989
 COMPLETED BY G. M. PARAMORE
 TELEPHONE (815)-942-2920

OPERATING STATUS

- | | | | |
|--|---------------|------------------------------------|-----|
| 1. REPORTING PERIOD: | february 1989 | GROSS HOURS IN REPORTING PERIOD: | 672 |
| 2. CURRENTLY AUTHORIZED POWER LEVEL (MWt): | 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 RESTRICTION (IF ANY): | n/a | | |

REPORTING PERIOD DATA

	THIS MONTH	YEAR-TO-DATE	CUMULATIVE
5. TIME REACTOR CRITICAL (HOURS)	672.0	1,416.0	114,324.3
6. TIME REACTOR RESERVE SHUTDOWN (HOURS)	0.0	0.0	0.0
7. TIME GENERATOR ON-LINE (HOURS)	672.0	1,396.5	106,520.6
8. TIME GENERATOR RESERVE SHUTDOWN (HOURS)	0.0	0.0	0.0
9. THERMAL ENERGY GENERATED (MMWt-Gross)	1,621,775	3,340,446	218,324,905
10. ELECTRICAL ENERGY GENERATED (MWe-Gross)	531,832	1,096,529	70,485,238
11. ELECTRICAL ENERGY GENERATED (MWe-Net)	508,994	1,048,140	66,785,566
12. REACTOR SERVICE FACTOR (%)	100.0	100.0	74.1
13. REACTOR AVAILABILITY FACTOR (%)	100.0	100.0	74.1
14. SERVICE FACTOR (%)	100.0	98.6	69.0
15. AVAILABILITY FACTOR (%)	100.0	98.6	69.0
16. CAPACITY FACTOR (USING MDC) (%)	98.0	95.8	56.0
17. CAPACITY FACTOR (USING DESIGN MWe) (%)	95.4	93.2	54.5
18. FORCED OUTAGE FACTOR (%)	0.0	1.4	12.5

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

n/a

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

n/a

3.3 AVERAGE DAILY UNIT POWER LEVEL (MWe-Net)

DOCKET NO. 050-237
 UNIT DRESDEN TWO
 DATE March 1, 1989
 COMPLETED BY G.P. PARAMORE
 TELEPHONE (815)-942-2920

REPORT PERIOD: february 1989

DAY	POWER	DAY	POWER
1	-5	17	-5
2	-4	18	-5
3	-3	19	-6
4	-3	20	-10
5	-3	21	16
6	-3	22	25
7	-3	23	139
8	-3	24	171
9	-3	25	357
10	-4	26	477
11	-3	27	515
12	-3	28	685
13	-5	29	
14	-5	30	
15	-4	31	
16	-5		

NOTE: Above generation figures do not reflect the auxiliary power used for cooling lake spray modules and/or lift pumps.

3.4 AVERAGE DAILY UNIT POWER LEVEL (MWe-Net)

DOCKED NO. 050-249
 UNIT DRESDEN THREE
 DATE March 1, 1989
 COMPLETED BY G.P. PARAMORE
 TELEPHONE (815)-942-2920

REPORT PERIOD: February 1989

DAY	POWER	DAY	POWER
1	787	17	737
2	761	18	726
3	775	19	733
4	765	20	706
5	755	21	744
6	792	22	776
7	796	23	772
8	793	24	734
9	735	25	735
10	767	26	786
11	752	27	787
12	742	28	795
13	724	29	
14	729	30	
15	783	31	
16	740		

NOTE: Above generation figures do not reflect the auxiliary power used for cooling lake spray modules and/or lift pumps.

3.5 UNIT SHUTDOWNS AND POWER REDUCTIONS

DOCKET NO. 050-237
 UNIT NAME DRESDEN UNIT II
 DATE March 1, 1989
 COMPLETED BY G. Paramore
 TELEPHONE (815)942-2920

REPORT MONTH FEBRUARY 1989

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
8	10-30-88	S	493:00	C	1	N/A	N/A	N/A	In 11th refueling outage (through February 21, 1989)
1	2/21/89	F	24.67	B	4	N/A	N/A	N/A	Unit 2 was brought to hot Standby conditions in order to perform additional balancing work on the main turbine. The Unit was then placed on line on February 22, 1989 at 1840 hours.

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

3.6 UNIT SHUTDOWNS AND POWER REDUCTIONS

DOCKET NO. 050-249
 UNIT NAME DRESDEN UNIT III
 DATE March 1, 1989
 COMPLETED BY G. Paramore
 TELEPHONE (815)942-2920

REPORT MONTH FEBRUARY, 1989

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
	NONE								

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

3.7. STATION MAXIMUM DAILY ELECTRICAL LOAD DATA
 DRESDEN STATION
 FEBRUARY, 1989

DAY	HOUR ENDING	MAXIMUM DAILY LOAD KW
1	0900	816,800
2	0900	812,800
3	1400	816,400
4	1600	818,700
5	1600	816,800
6	1100	820,200
7	1600	822,400
8	1900	821,000
9	0500	769,100
10	1600	819,100
11	0400	820,700
12	2000	770,400
13	0100	770,500
14	2200	798,000
15	1500	821,300
16	1400	769,900
17	1400	769,300
18	0300	760,900
19	2000	808,100
20	1500	743,000
21	1600	943,500
22	2100	959,800
23	2000	958,700
24	0200	954,600
25	2300	1,302,900
26	2400	1,411,700
27	0800	1,485,600
28	2300	1,587,800

4.0 UNIQUE REPORTING REQUIREMENTS

4.1 MAIN STEAM RELIEF VALVE OPERATIONS

Relief valve operations during the reporting period, February, 1989, 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.

<u>Unit</u>	<u>Date</u>	<u>Valves Actuated</u>	<u>No. and Type of Actuations</u>	<u>Plant Conditions</u>	<u>Description of Events</u>
2	2/20/89	2-203-3A 2-203-3B 2-203-3C 2-203-3D 2-203-3E	5, Manual	Start-Up	Relief valves were opened during the performance of Dresden Operating Surveillance (DOS) 250-5, Automatic Blowdown Systems Test at Low Reactor Pressure During Unit 2 Startup.
2	2/22/89	2-203-3A 2-203-3B 2-203-3C 2-203-3D 2-203-3E	5, Manual	Start-Up	Relief valves were opened during the performance of Dresden Operating Surveillance (DOS) 250-5, Automatic Blowdown Systems Test at Low Reactor Pressure During Unit 2 Startup.
2/3		Spare Safety Valve Serial Nos: BK 6527 BK 6304 BK 7162 BK 6282	4, Bench Tested	NA	These spare safety valves were bench tested and rebuilt for future use.

4.2 OFF-SITE DOSE CALCULATIONS MANUAL CHANGES

None

4.3 MAJOR CHANGES TO THE RADIOACTIVE WASTE TREATMENT SYSTEMS

None

4.4 FAILED FUEL ELEMENT INDICATIONS

4.4.1 Unit 2

None

4.4.2 Unit 3

None

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 changes which were approved and implemented for use during the reporting period are listed below.

5.1.1 Unit 2

The NRC has approved Amendment 104 to the Unit 2 Technical Specifications. This amendment incorporates into the Technical Specifications the changes to the Nuclear Thermal Limits required before start-up after refueling. Amendment 104 defines or redefines the following terms:

- (1) LHGR - Linear Heat Generation Rate
- (2) SLHGR - Steady State LHGR
- (3) TLHGR - Transient LHGR
- (4) FDLRC - Fuel Design Limiting Ratio for Centerline Melt
- (5) FDLRX - Fuel Design Limiting Ratio for Exxon Fuel

APRM flow biased rod block and scram settings multiplier is changed from FRP/MFLPD to 1/FDLRC. Limiting Conditions for Operations are added for FDLRC and FDLRX. LHGR curves are also redefined to reflect the inclusion of FDLRC and FDLRX.

The MCPR operating limit and safety limit will be increased by a factor of 0.01 (this factor was formerly 0.03) during Single Loop Operation.

Currently, with one ADS valve inoperable, continued operation above 90 psig is allowed for seven (7) days provided HPCI is operable; the revised LCO will allow indefinite operation with one relief valve inoperable provided that the MAPLHGR Reduction Factors (MRFs) are applied to the appropriate MAPLHGR limits. With more than one (1) relief valve inoperable, operation is permitted for the next seven (7) days if HPCI is operable and the appropriate MRFs are applied. More detail is provided in paragraph 3.5.D.2 of the Technical Specifications. The implementation of this amendment was completed before start-up of Unit 2 on February 21, 1989.

5.1.2 Unit 3

None

5.2 Changes to Procedures Which are Described in the FSAR (Units 2 and 3)

Table 5.2.1, attached, summarizes the revisions to procedures described in the FSAR which were approved during the month of January, 1989.

TABLE 5.2.1

CHANGES TO PROCEDURES WHICH ARE DESCRIBED IN THE FSAR (UNITS 2 AND 3)

PROCEDURE TYPE	PROCEDURE NO.	PROCEDURE TITLE/DESCRIPTION	SUMMARY OF CHANGES
Dresden Operating Surveillance (DOS)	6600-6	Bus Undervoltage and ECCS Integrated Functional Test for Unit 2/3 Diesel Generator (Unit 2 Test Only)	3,4
Dresden Technical Surveillance (DTS)	1600-22	Secondary Containment Leak Test	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 and 3)

Significant special procedures involving tests not described in the FSAR which were approved during the month of February 1989 are listed below.

<u>Procedure No.</u>	<u>Procedure Title/Description</u>
SP 89-1-16	Test procedure for flushing of the high and low pressure feedwater heaters to remove particulate.
SP 89-2-17	Modification test procedure for visual inspection and functional testing of two dyrwell atmosphere temperature thermocouples relocated under Modification M12-2-88-64.
SP 89-2-19	Test procedure for vibrational analysis of two reactor recirculation pumps.
SP 89-2-20	Test procedure for functionally testing the control blade guide racks fabricated by Lockport Steel Fabricators Co. Purpose of procedure was to test the coating before installation of the racks.
SP 89-2-21	Test procedure to ensure proper operation of a station radio system power supply power seeking relay.
SP 89-2-22	Test procedure to perform routine post maintenance and calibration of explosive detectors in order to minimize downtime.

5.4 Safety related maintenance (Units 2 and 3)

Safety related maintenance activities are summarized in the attached tables.

5.4 SAFETY RELATED MAINTENANCE

EQUIPMENT	NATURE OF MAINTENANCE	LER OR OUTAGE NUMBER	MALFUNCTION CAUSE	RESULT	CORRECTIVE ACTION
EAST HPCI OIL FILTER	CORRECTIVE WR D64547	N/A	-----	-----	CLEANED OIL FILTER AND REINSTALLED
D2 PENETRATIONS IN REACTOR AREA	CORRECTIVE WR D69199	N/A	-----	-----	REPLACED MAIN STEAM LINE PENETRATIONS IN REACTOR AREA, LEFT OK
LINE 2-1402-16"-LX	CORRECTIVE WR D71658	N/A	-----	-----	CLEANED EXISTING WELD, FIT UP AND CUSTOM GROUND SADDLE IN PLACE PER PROCEDURE, LEFT OK
LINE 2-1401-16"-LX	CORRECTIVE WR D71659	N/A	-----	-----	CLEANED EXISTING WELD, FIT UP AND CUSTOM GROUND SADDLE IN PLACE PER PROCEDURE, LEFT OK
2-MQ-1501-5A	PREVENTIVE WR D72195	N/A	-----	-----	INSTALLED NEW GASKETS AND GREASE RELIEF KIT PER PROCEDURE, LEFT OK
2-3930-525 U2 DG COOLING WATER FLOW REVERSAL VALVES	CORRECTIVE WR D72216	N/A	-----	-----	INSTALLED NEW PLUG, LEFT OK
DPIS 2-261-2K MAIN STEAM LINE 'C' HIGH FLOW SWITCH	PREVENTIVE WR D72520	N/A	-----	-----	REPLACED SWITCH AND MOVEMENT AND CALIBRATED PER PROCEDURE, LEFT OK
902-3 PANEL T.B. 'RR' FUSE BLOCK	PREVENTIVE WR D72839	N/A	-----	-----	REPLACED BROKEN FUSE BLOCK, LEFT OK
MOV 2-2301-49 LOCAL VALVE CONTROL	CORRECTIVE WR D74319	N/A	-----	-----	REPLACED LIGHT BULB AND CYCLED VALVE, LEFT OK
SUPPORT M1151D-147	CORRECTIVE WR D76583	N/A	-----	-----	ADJUSTED STRUT AND TIGHTENED LOCK NUT LEFT OK

DRESDEN UNIT 2
SAFETY RELATED MAINTENANCE

EQUIPMENT	NATURE OF MAINTENANCE	LER OR OUTAGE NUMBER	MALFUNCTION CAUSE	RESULT	CORRECTIVE ACTION
2-1201-2	CORRECTIVE WR 077077	N/A	-----	-----	TIGHTENED UP MISC. OIL LEAKS LEFT OK
U2 DIESEL GENERATOR CYLINDER HEAD #1 AND#5 THERMOCOUPLES	PREVENTIVE WR 077086	N/A	-----	-----	TESTED THERMOCOUPLES, FOUND NO PROBLEMS, LEFT OK
D02-0201-0021-R25 CONTROL ROD BLADES	PREVENTIVE WR 077463	N/A	-----	-----	INSTALLED NEW BLADES PER PROCEDURE
RECIRC DISCHARGE CROSSTIE VALVE 2-202-6A	PREVENTIVE WR 078127	N/A	-----	-----	PERFORMED WORK PER TRAVELER, LEFT OK
PS2-31 U2 TARGET ROCK VALVE	CORRECTIVE WR 078263	N/A	-----	-----	REPLACED CONNECTOR, LEFT OK
MOV 1501-5C	PREVENTIVE WR 078307	N/A	-----	-----	COMPLETED PROCEDURE, LEFT OK
2-305-117 AND 305-119 CRD SCRAM PILOT SOLENOID	PREVENTIVE WR 078909	N/A	-----	-----	REPLACED SOLENOIDS, TORQUED ALL NUTS AND BONNET SCREWS PER PROCEDURE, LEFT OK
8001-A 2-A RPS M.G. SET OUTPUT BREAKER	PREVENTIVE WR 079023	N/A	-----	-----	PERFORMED WORK PER PROCEDURE, LEFT OK
8001-B R.P.S. M.G. SET OUTPUT BREAKER	PREVENTIVE WR 079024	N/A	-----	-----	PERFORMED WORK PER PROCEDURE, LEFT OK
2-1602-1	CORRECTIVE WR 079036	N/A	-----	-----	REMOVED RESISTOR AND RELOADED WIRE BACK ON METER, LEFT OK

DRESDEN UNIT 2
SAFETY RELATED MAINTENANCE

EQUIPMENT	NATURE OF MAINTENANCE	LER OR OUTAGE NUMBER	MALFUNCTION CAUSE	RESULT	CORRECTIVE ACTION
2-7503 REACTOR BUILDING VENT HEADER TO S8GT VALVE	CORRECTIVE WR D79060	N/A	-----	-----	PULLED LEAKING PIPE PLUGS, THREADS CLEANED, REINSTALLED AND TIGHTENED, LEFT OK
1699-588 TORUS DRAIN VALVE	PREVENTIVE WR D79621	N/A	-----	-----	CLEANED INTERNALS AND INSTALLED NEW GASKET, LEFT OK
250VDC REPLACEMENT BATTERY	PREVENTIVE WR D79738	N/A	-----	-----	CHARGED BATTERY, DISCONNECTED BATTERY FROM CHARGER FOR MOD INSTALLATION, LEFT OK
2-2301-45 STEAM RETURN	CORRECTIVE WR D79750	N/A	-----	-----	REPLACED VALVE PER PROCEDURE, LEFT OK
INSTRUMENT RACK 2202-8	CORRECTIVE WR D79770	N/A	-----	-----	REMOVED AND INSTALLED INSTRUMENTS FROM INSTRUMENT RACK PER PROCEDURE, LEFT OK
CORE SPRAY DISCHARGE SUPPORT M-3209-04	CORRECTIVE WR D79965	N/A	-----	-----	REMOVED LIGHT CORROSION WITH A WIRE BRUSH AND PAINTED, LEFT OK
LPCI DISCHARGE SUPPORT M-3213-19	CORRECTIVE WR D79966	N/A	-----	-----	LOOSENED JAM NUT AND ADJUSTED HANGER ROD, LEFT OK
C/S DISCHARGE SUPPORT M-3209-19	PREVENTIVE WR D80010	N/A	-----	-----	REMOVED LIGHT CORROSION AND PAINTED EXPOSED METAL, INSTALLED CARBON SPACER, LEFT OK
CABLE AA714	PREVENTIVE WR D80041	N/A	-----	-----	RELANDED WIRE AND RELABELLED AS NECESSARY, LEFT OK
2-6600 U2 D.G. 'STR' RELAY	PREVENTIVE WR D80123	N/A	-----	-----	REPLACED RELAY PER PROCEDURE, LEFT OK

DRESDEN UNIT 2
SAFETY RELATED MAINTENANCE

EQUIPMENT	NATURE OF MAINTENANCE	LER OR OUTAGE NUMBER	MALFUNCTION CAUSE RESULT	CORRECTIVE ACTION
DRYWELL EQ & PCIS AND RECIRC VALVES	PREVENTIVE WR D80134	N/A	-----	WIPED OFF VALVE STEMS AND LUBRICATED FOUND NO LEAKING AND MOISTURE, LEFT OK
C&D CCSW SUPPORT M-1164D-274	CORRECTIVE WR D80153	N/A	-----	TIGHTENED TOP AND BOTTOM NUT ON PIPE CLAMP, LEFT OK
RM2-1705-16B D2 REACTOR BUILDING FUEL FLOOR ARM 'B'	CORRECTIVE WR D80242	N/A	-----	REPLACED INDICATOR/TRIP UNIT PER PROCEDURE, LEFT OK
ALL RODS	PREVENTIVE WR D80260	N/A	-----	INSTALLED AND REMOVED JUMPER, LEFT OK
2-1402-6A POSITION SWITCH	PREVENTIVE WR D80460	N/A	-----	REMOVED CABLE, LEFT OK
2-1101-1 LIMIT SWITCH	PREVENTIVE WR D80465	N/A	-----	REMOVED CABLE, LEFT OK
2-6600 DIESEL GENERATOR	PREVENTIVE WR D80635	N/A	-----	INSTALLED NEW BEARING CUP, LEFT OK
A02-220-46	PREVENTIVE WR D80683	N/A	-----	TESTED LIMITS, LEFT OK
A02-220-46	PREVENTIVE WR D80684	N/A	-----	INSPECTED AND TESTED SOLENOID VALVE PER PROCEDURE, LEFT OK
A02-220-47	PREVENTIVE WR D80685	N/A	-----	TESTED LIMITS, LEFT OK

SAFETY RELATED MAINTENANCE

EQUIPMENT	NATURE OF MAINTENANCE	LER OR OUTAGE NUMBER	MALFUNCTION CAUSE RESULT	CORRECTIVE ACTION
A02-220-47	PREVENTIVE WR D80686	N/A	-----	INSPECTED AND TESTED SOLENOID VALVE PER PROCEDURE, LEFT OK
VALVE 2-1402-6A	PREVENTIVE WR D80687	N/A	-----	TESTED LIMITS, LEFT OK
VALVE 2-1402-6B	PREVENTIVE WR D80688	N/A	-----	TESTED LIMITS, LEFT OK
VALVE 2-1101-1	PREVENTIVE WR D80689	N/A	-----	TESTED LIMITS, LEFT OK
A02-220-52	PREVENTIVE WR D80690	N/A	-----	TESTED LIMITS, LEFT OK
2-1402-9B VALVE	PREVENTIVE WR D80694	N/A	-----	BENCH TESTED LIMIT SWITCHES, LEFT OK
A02-220-51	PREVENTIVE WR D80696	N/A	-----	BENCH TESTED LIMIT SWITCHES, LEFT OK
SBLC TEST TAPS II-1199-106&107	PREVENTIVE WR D80818	N/A	-----	INSTALLED CALIBRATED GAUGE ON TEST TAPS, REMOVED GAUGE AND PERFORMED AFTER TEST PER PROCEDURE, LEFT OK
CABLES TO 2-220-47, 2-1101-1 AND 2-220-52	PREVENTIVE WR D80851	N/A	-----	MANDRELED ALL CONDUITS ASSOCIATED WITH VALVES, LEFT OK
FT2-2541-2B CONT. TO SGT FLOW TX 'B'	PREVENTIVE WR D80895	N/A	-----	INSPECTED PROBLEM AND WROTE WR#81662 REPAIR PROBLEM,

DRESDEN UNIT 2
SAFETY RELATED MAINTENANCE

EQUIPMENT	NATURE OF MAINTENANCE	LER OR OUTAGE NUMBER	MALFUNCTION CAUSE RESULT	CORRECTIVE ACTION
RELAY 595-100D	PREVENTIVE WR D80953	N/A	-----	CLEANED CONTACTS AND TESTED PER PROCEDURE, LEFT OK
IRM #18	CORRECTIVE WR D81010	N/A	-----	REPAIRED CONNECTOR AND COMPLETED PROCEDURE, LEFT OK
SUPPORT M-11500-252	CORRECTIVE WR D81169	N/A	-----	ADJUSTED SETTING ON CAN AND TIGHTENED JAM NUT, LEFT OK
HCU 38-59 CRD K-15 (120 VALVE)	PREVENTIVE WR D81214	N/A	-----	REPLACED CRD'S, 120 SOLENOID AND O-RINGS, LEFT OK
2-0700-MISC IRM #12	CORRECTIVE WR D81245	N/A	-----	REPLACED CONNECTOR PER PROCEDURE, LEFT OK
IRM 13	CORRECTIVE WR D81276	N/A	-----	INSTALLED METAL MOUNTING BOLTS, LEFT
RE2-7518 SRM#23 DETECTOR RESPONSE	CORRECTIVE WR D81286	N/A	-----	REPLACED SRM DETECTOR AND PRE-AMP PER PROCEDURE, LEFT OK
SRM 21	CORRECTIVE WR D81294	N/A	-----	PERFORMED PROCEDURE, LEFT OK
2-2320-02 SNUBBER	PREVENTIVE WR D81369	N/A	-----	REMOVED SNUBBER, HAND STROKED AND REINSTALLED PER PROCEDURE, LEFT OK
BUS 28 MAIN FEED BREAKER	PREVENTIVE WR D81503	N/A	-----	REPLACED A AND C PHASE TRIP DEVICES PER PROCEDURE, LEFT OK

UNRESOLVED ONLY
SAFETY RELATED MAINTENANCE

EQUIPMENT	NATURE OF MAINTENANCE	LER OR OUTAGE NUMBER	MALFUNCTION CAUSE	RESULT	CORRECTIVE ACTION
2B BECCW PUMP 4KV BREAKER	PREVENTIVE WR 081505	N/A	-----	-----	REPLACED AUX SWITCH, LEFT OK
BUS 28-28-7 BREAKER CLS	PREVENTIVE WR 081607	N/A	-----	-----	REMOVED AND REPLACED CONTROL SWITCH, LEFT OK
B28 TO BUS 28-7 TO 29-7	PREVENTIVE WR 081631	N/A	-----	-----	REPLACED CLOSING COIL AND ARAMATURE, REPAIRED AND LUBED AUX CONTACTS, LEFT OK

DRESDEN UNIT 3
SAFETY RELATED MAINTENANCE

EQUIPMENT	NATURE OF MAINTENANCE	LER OR OUTAGE NUMBER	MALFUNCTION CAUSE	RESULT	CORRECTIVE ACTION
SRM 22	PREVENTIVE WR 060198	N/A	-----	-----	VERIFIED RELAY ENERGIZED PER PROCEDURE, LEFT OK
1402-3A, 3B, 4A, 24A, 24B, 25A, 25B CORE SPRAY VALVES	PREVENTIVE WR 070298	N/A	-----	-----	INSTALLED HEATERS, LEFT OK
3-1401-3A MOV	PREVENTIVE WR 070695	N/A	-----	-----	REMOVED AND REINSTALLED MOTOR, LIMIT SWITCHES AND TORQUE SWITCH PER PROCEDURE, LEFT OK
U3 MOV 1501-19B	PREVENTIVE WR 070701	N/A	-----	-----	REMOVED AND REINSTALLED MOTOR PER PROCEDURE, LEFT OK
3-1401B '3B' CORE SPRAY PUMP MOTOR	PREVENTIVE WR 074300	N/A	-----	-----	CLEANED AND INSPECTED MOTOR AND INSTALLED NEW BEARING AND GASKET, LEFT OK
LPRM 48-41A (APRM 4)	CORRECTIVE WR 076260	N/A	-----	-----	PLACED SHORTING LINK ON CA UNDER POT PER PROCEDURE, LEFT OK
261-15B, 16B, 17B & 18B 'B' CHANNEL REACTOR AREA TEMPERATURE SWITCHES	PREVENTIVE WR 076368	N/A	-----	-----	INSTALLED AND REMOVED JUMPER, LEFT OK
261-15D, 16D, 17D AND 18D 'D' CHANNEL REACTOR AREA TEMPERATURE SWITCHES	PREVENTIVE WR 076369	N/A	-----	-----	INSTALLED RELAY TEST FIXTURE AND JUMPER AND REMOVED, LEFT OK
MTU 3-2391-03	CORRECTIVE WR 078625	N/A	-----	-----	COMPLETED PROCEDURE AND ADJUSTED TRIP POINT, LEFT OK
DE-2501-C-20 ACAD COMPRESSOR	CORRECTIVE WR 079234	N/A	-----	-----	TIGHTENED PIPE AND TUBING TO ELIMINATE LEAKAGE, LEFT OK

DRESDEN UNIT 3
SAFETY RELATED MAINTENANCE

EQUIPMENT	NATURE OF MAINTENANCE	LER OR OUTAGE NUMBER	MALFUNCTION CAUSE	RESULT	CORRECTIVE ACTION
LPRM 2B-48-49 (AFRM CH. 3)	CORRECTIVE WR 079264	N/A	-----	-----	INSPECTED LPRM PER PROCEDURE, FOUND NO PROBLEMS, LEFT OK
LPRM 5C-40-25	PREVENTIVE WR 079787	N/A	-----	-----	PERFORMED PROCEDURE FOR LPRM, FOUND NO PROBLEMS, LEFT OK
D3 HPCI OIL SYSTEM	PREVENTIVE WR 079885	N/A	-----	-----	INSTALLED HPCI PRESSURE SWITCH TEST TAPS, LEFT OK
ACCUM 50-11	CORRECTIVE WR 079888	N/A	-----	-----	CHECKED CALIBRATION AND REPLACED RELAY PER PROCEDURE, LEFT OK
A03-220-47	CORRECTIVE WR 080431	N/A	-----	-----	TIGHTENED DIAPHRAGM CASE FLANGES, LEFT OK
M03-2301-10 HPCI FLOW TEST RETURN	PREVENTIVE WR 080503	N/A	-----	-----	INSTALLED NEW PINION GEAR PER PROCEDURE, LEFT OK
HCU F13-(22-51)	CORRECTIVE WR 080957	N/A	-----	-----	INSTALLED NEW ACCUMULATOR PER PROCEDURE, LEFT OK
RM3-1705-20 3D MAIN STEAM LINE ROD MONITOR	CORRECTIVE WR 081092	N/A	-----	-----	CHANGED RELAYS TO NO SELF TEST, LEFT OK
RM3-1705-2A 3A MAIN STEAM LINE ROD MONITOR	CORRECTIVE WR 081093	N/A	-----	-----	CHANGED RELAYS TO NO SELF TEST, LEFT OK

SAFETY RELATED MAINTENANCE

EQUIPMENT	NATURE OF MAINTENANCE	LER OR OUTAGE NUMBER	MALFUNCTION CAUSE	RESULT	CORRECTIVE ACTION
2/3-3930-3 DIESEL GENERATOR SERVICE WATER SUPPORT	CORRECTIVE WR D75173	N/A	-----	-----	REMOVED SUPPORT COMPONENTS, INSPECTED PLATE, GROUND SMOOTH AND REPAINTED CEILING, LEFT OK
2/3-203 SPARE ELECTROMATIC RELIEF VALVE	CORRECTIVE WR D75204	N/A	-----	-----	INSPECTED AND LAPPED MAIN AND PILOT SEATS PER PROCEDURE, LEFT OK
CB-1, CB-2, AND CB-3 50 AMP BREAKER FOR DIESEL GENERATOR PRE-LUBE MODS	PREVENTIVE WR D80571	N/A	-----	-----	PERFORMED BREAKER TESTING PER PROCEDURE LEFT OK

5.5 Completed Safety Related Modifications (Units 2 and 3)

Unit 2 and Unit 3 safety related modification packages closed during the month of February, 1989 are listed below. Only modifications which have been completely closed 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.

<u>Modification No.</u>	<u>Description</u>
M12-2-85-75	Replaced the existing General Electric (GE) type CFD differential relays for the output breakers of the Unit 2, 2/3 and 3 Diesel Generators with seismically qualified, Westinghouse type SA-1 Generator differential relays. The safety evaluation concluded that the relays will increase the seismic reliability of the generators.
M12-2-86-32	Replaced the existing 3/4" O.D. x 18 BWG 70-30 CuNi tubes inside the Low Pressure Coolant Injection (LPCI) Heat Exchangers with a new tube material type of AL-6Xn. The new material will be less susceptible to corrosion and pitting resulting from stagnant water conditions in the LPCI Heat Exchangers during standby conditions. The safety evaluation concludes that margin of safety is not reduced.
M12-88-03A	This modification involved providing new safety-related High Pressure Coolant Injection (HPCI) system and feedwater small bore tap line supports to ensure proper support for vibration and flexibility required for long term plant operation. The safety evaluation concluded that the additional pipe supports increase the reliability of the associated piping in case of a seismic event.
M12-2-86-29	Modification of the Emergency Core Cooling System (ECCS) pump minimum flow valve logic to provide the control room operator with the ability to close the minimum flow valves even with an accident signal present. The safety evaluation concluded that the logic changes provide a minimum flow path for ECCS pumps in order to prevent dead heading without jeopardizing the containment isolation function.

5.5 Completed Safety Related Modifications (Units 2 and 3)

<u>Modification No.</u>	<u>Description</u>
M12-2-88-56	Modification involved replacing the existing Unit 2 125 Volt Type GNB NCX-1344 Battery (1344 Amp/hour nominal capacity) with a type NCS-1500, 58 cell, 125 Volt Battery (1408 Amp/hour nominal capacity at an 8 hr. rate) for improved performance. The safety evaluation concluded that the new battery has an increased number of plates and amperes-hour capacity and therefore is adequate for supplying the load profile for (4) hours with an end discharge terminal voltage of 105 volts, in accordance with Technical Specification Section 3.9 requirements.
M12-2-87-39	Replacement of the existing General Electric (GE) type CR 120 time delay relays for the automatic depressurization system (ADS) with new Agastat Series TR time delay relays. The existing relays were found to experience calibration drift. The safety evaluation concluded that the new relays trip in less than or equal to 120 seconds, in accordance with Technical Specification Table 3.2.2, and will provide improved performance.
M12-2/3-86-4B	Modification involved the installation of a new voltmeter for the Unit 2/3 Diesel Generator. The safety evaluation concluded that separation of the wiring and the elimination of a common switch for the above mentioned equipment does not introduce a new failure and is in accordance with Technical Specification Section 3.9.
M12-3-86-41A	This modification involved re-routing various Containment Atmosphere Dilution/Containment Atmosphere Monitoring (ACAD/CAM) system small bore torus attached piping from the torus such that the lines are no longer attached to the torus catwalk and installing an anchor support to isolate the Mark I design loads. The safety evaluation concluded that the implementation of this modification reduces the probability of piping failure during hydrodynamic and seismic loads.

5.5 Completed Safety Related Modifications (Units 2 and 3)

Modification No.

Description

M12-3-88-20

This modification involved replacing existing flued heads anchors for containment penetrations X-113, X-108A, and X-109A with new flued head anchor structures with increased load capacity. The safety evaluation concluded that the new anchor structures will resist pipe loads due to pipe breaks or seismic events and will function in accordance with FSAR requirements.

5.6 Temporary System Alterations (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 routing 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.

The following tables summarize the temporary system alterations performed during February, 1989.

5.6.1 Unit 2

<u>Temporary System Alteration No.</u>	<u>Description</u>	<u>Installation Date</u>	<u>Removal Date</u>
II-9-89	Bypass interlocks to operate a recirculation system motor-generator (MG) set without starting the pump to run in MG Set brushes following maintenance.	2-3-89	2-10-89
II-10-89	Move vessel head space thermocouple to flange area.	2-6-89	
II-11-89	Lift solenoid wires to A0 2-1601-59 valve for solenoid replacement	2-10-89	2-11-89
II-12-89	Swap cables between Intermediate Range Monitors (IRMs) 13 and 15 to repair IRM 13	2-12-89	2-12-89
II-13-89	Bypass Shutdown Cooling (SDC) system isolation for thermocouple repairs	2-13-89	2-13-89
II-14-89	Lifted leads to calibrate a Containment Cooling Service Water (CCSW) system heat exchanger recorder	2-14-89	2-14-89
II-15-89	Defeat interlocks to test HPCI limit switch LS-7A	2-16-89	2-17-89
II-16-89	Bypass Average Power Range (APRM) scram to replace Control Rod Drive (CRD) N-7	2-13-89	2-13-89

5.6.2 Unit 3

Temporary
System

Alteration No.

Description

Installation
Date

Removal
Date

III-3-89 HPCI Room Temperature
switch for calibration

2-6-89

2-7-89

III-4-89 HPCI area temperature
switch for calibration

2-8-89

2-8-89

III-5-89 HPCI area temperature
switch for calibration

2-21-89

2-22-89

III-6-89 HPCI area temperature
switch for calibration

2-22-89

2-23-89