

Detroit Edison



April 22, 2005
NRC-05-0032

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

Reference: Fermi 2
NRC Docket No. 50-341
NRC License No. NPF-43

Subject: 2004 Annual Reports for Fermi 2

The Fermi 2 Technical Specifications (TS) contain requirements for submitting a report for occupational radiation exposure (Technical Specification 5.6.1) and safety relief valve challenges (Technical Specification 5.6.6). Enclosures A and B are provided in accordance with Technical Specifications 5.6.1 and 5.6.6 to meet these requirements.

Enclosure C is attached and contains a report on service life of the main steam bypass lines. This satisfies the commitment stated in Detroit Edison letter to the NRC dated November 7, 1986 (VP-86-0154).

Enclosure D is attached in accordance with 10 CFR 50.46(a)(3)(ii) and contains a report of Emergency Core Cooling System (ECCS) cooling performance evaluation model changes or errors.

Should you have any questions or require additional information, please contact me at (734) 586-4258.

Sincerely,

A handwritten signature in black ink, appearing to be 'NKP'.

Norman K. Peterson
Manager – Nuclear Licensing

Handwritten initials 'IESB' in black ink, located in the bottom right corner of the page.

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Enclosure A: Occupational Radiation Exposure Report
Enclosure B: Safety Relief Valve Challenge Report
Enclosure C: Service Life of Main Steam Bypass Lines
Enclosure D: ECCS Cooling Performance Evaluation Model Changes or Errors

cc: w/Enclosures
E. R. Duncan
N. K. Ray
NRC Resident Office
Regional Administrator, Region III
Supervisor, Electric Operators,
Michigan Public Service Commission

ENCLOSURE A

FERMI 2

OCCUPATIONAL RADIATION EXPOSURE REPORT

JANUARY 1 - DECEMBER 31, 2004

DETROIT EDISON COMPANY

NRC DOCKET NO. 50-341

FACILITY OPERATING LICENSE NO. NPF-43

**Detroit Edison Fermi 2
 2004 Regulatory Guide 1.16 Secondary Dosimeter Deep Dose Equivalent (DDE) Dose Report**

Function	Department	Personnel Receiving Exposure			DDE Manrem		
		Station Employees	Utility Employees	Contract Workers	Station Employees	Utility Employees	Contract Workers
Reactor Operations & Surveillance	Maintenance	136	37	222	11.268	0.557	7.104
	Operations	151	3	89	15.344	0.000	10.238
	Health Physics	46	6	65	8.152	0.022	4.049
	Supervisory	249	38	193	3.557	0.157	1.174
	Engineering	93	3	103	1.327	0.058	0.128
Routine Maintenance	Maintenance	43	29	627	4.770	0.537	35.697
	Operations	0	0	1	0.000	0.000	0.183
	Health Physics	0	0	4	0.000	0.000	0.415
	Supervisory	1	5	34	0.000	0.000	1.805
	Engineering	2	1	9	0.271	0.099	1.002
Inservice Inspection	Maintenance	0	0	49	0.000	0.000	5.609
	Operations	0	0	0	0.000	0.000	0.000
	Health Physics	0	0	0	0.000	0.000	0.000
	Supervisory	1	0	14	0.058	0.000	2.519
	Engineering	1	0	9	0.073	0.000	1.294
Special Maintenance	Maintenance	1	1	104	0.014	0.000	14.897
	Operations	0	0	0	0.000	0.000	0.000
	Health Physics	0	0	10	0.000	0.000	1.776
	Supervisory	0	4	5	0.000	0.068	0.031
	Engineering	3	0	2	0.150	0.000	0.040
Waste Processing	Maintenance	0	0	0	0.000	0.000	0.000
	Operations	2	0	18	0.081	0.000	0.935
	Health Physics	0	0	0	0.000	0.000	0.000
	Supervisory	0	0	0	0.000	0.000	0.000
	Engineering	0	0	0	0.000	0.000	0.000
Refueling	Maintenance	2	0	52	0.205	0.000	6.102
	Operations	0	0	0	0.000	0.000	0.000
	Health Physics	0	0	8	0.000	0.000	0.806
	Supervisory	1	0	3	0.000	0.000	0.087
	Engineering	1	0	3	0.005	0.000	0.013
Total	Maintenance	182	67	1054	16.257	1.094	69.409
	Operations	153	3	108	15.425	0.000	11.356
	Health Physics	46	6	87	8.152	0.022	7.046
	Supervisory	252	47	249	3.615	0.225	5.616
	Engineering	100	4	126	1.826	0.157	2.477
Grand Total		Personnel	2484	Manrem	142.677		

NOTE: This report was produced using only secondary external dosimetry - it does not include any internal exposure.

ENCLOSURE B

FERMI 2

SAFETY RELIEF VALVE CHALLENGE REPORT

JANUARY 1 - DECEMBER 31, 2004

DETROIT EDISON COMPANY

NRC DOCKET NO. 50-341

FACILITY OPERATING LICENSE NO. NPF-43

Safety Relief Valve Challenges

There were no instances in 2004 where reactor pressure was high enough to require Safety Relief Valve (SRV) actuation. There were no instances in 2004 where an SRV actuation was demanded by an automatic logic system. On December 2, 2004, following completion of the Tenth Refueling Outage (RF10), Surveillance Procedure 24.137.11, "Safety Relief Valve Operability Test," was satisfactorily performed, which cycled all 15 Safety Relief Valves (SRVs).

ENCLOSURE C

FERMI 2

SERVICE LIFE OF MAIN STEAM BYPASS LINES

JANUARY 1 - DECEMBER 31, 2004

DETROIT EDISON COMPANY

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Service Life of Main Steam Bypass Line

In accordance with Detroit Edison letter to the NRC dated November 7, 1986 (VP-86-0154), the cumulative time the main steam bypass lines are operated with the bypass valves between 30 percent and 45 percent open will be reported annually. A cumulative value of 100 days is not to be exceeded without prior NRC notification.

Evaluations performed by Stone and Webster and by Hopper and Associates concluded that the bypass lines are acceptable for safe operation when operated within the 100 day constraint. Based on these evaluations, the new main steam bypass piping that was installed in 1985 has a service life that will allow it to function for the life of the plant under anticipated operating conditions. The main steam bypass lines cumulative usage was 40.57 days as of December 31, 2004.

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ENCLOSURE D

FERMI 2

ECCS COOLING PERFORMANCE EVALUATION MODEL CHANGES OR ERRORS

JANUARY 1 - DECEMBER 31, 2004

DETROIT EDISON COMPANY

NRC DOCKET NO. 50-341

FACILITY OPERATING LICENSE NO. NPF-43

ECCS Cooling Performance Evaluation Model Changes or Errors

One error has been identified since last year's annual report. The error has no impact on Fermi 2 peak clad temperature (PCT) results and therefore, was not reported. A description of the error is provided below:

On May 13, 2004, Global Nuclear Fuel (GNF) informed Detroit Edison, in General Electric (GE) 10 CFR 50.46 Notification Letter 2003-05, of an error found in the GE SAFER/GESTR-LOCA code. This letter describes a new heat source, which has been postulated during a Loss of Coolant Accident (LOCA). This heat source involves the recombination of hydrogen and oxygen within a fuel bundle during core heatup. The error only contributes to increasing peak clad temperature (PCT) results for non-jet pump plants. This is due to the fact that oxygen from the containment enters the vessel late in the LOCA event, after the core has reflooded for jet pump plants. Therefore, this error has no impact on Fermi 2.

The current Licensing Basis PCT for Fermi 2 remains at 1752 degrees Fahrenheit and there is still 448 degrees Fahrenheit margin to the 2200 degrees Fahrenheit PCT limit given in 10 CFR 50.46.