

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the Matter of
DETROIT EDISON COMPANY
(FERMI-2)

}
}
} Docket No. 50-341

EXEMPTION

I.

Detroit Edison Company (DECo, the licensee) is the holder of Facility Operating License No. NPF-43 which authorizes operation of Fermi-2 (the facility) at a steady-state power level not in excess of 3292 megawatts thermal. The facility is a boiling water reactor (BWR) located on the licensee's site in Monroe County, Michigan. The license provides, among other things, that the facility is subject to all rules, regulations, and orders of the Nuclear Regulatory Commission (the Commission) now or hereafter in effect.

The revision to 10 CFR Part 55, "Operators' Licenses," which became effective on May 26, 1987, established requirements for the administration of operating tests on nuclear power plant simulators. These regulations, in conjunction with 10 CFR 50.54(i-1), require facility licensees to use simulation facilities when administering operating tests for initial licensing and requalification. These regulations further require that a certified or NRC-approved simulation facility must be used to administer operating tests after May 26, 1991. By letter dated January 31, 1991, as supplemented March 21, 1991, DECo requested an exemption from the scheduler requirements for certification and use of a plant-referenced simulator.

II.

The licensee intends to comply with 10 CFR 55.45(b) by certifying a plant-referenced simulator. 10 CFR 55.45(b)(2)(iii) requires that facility licensees proposing to use a simulation facility consisting solely of a plant-referenced simulator submit Form NRC-474, "Simulation Facility Certification," no later than 46 months after the effective date of this rule, that is, by March 26, 1991. On January 31, 1991, as supplemented March 21, 1991, DECo requested an exemption from this filing requirement to allow for the submittal of NRC Form-474 after March 26, 1991, but no later than December 31, 1991. Additionally, DECo requested an exemption from the requirements of 10 CFR 55.45(b)(2)(iv) to allow the simulation facility portion of operating tests to be administered on the existing Fermi-2 simulator before the upgraded simulator is certified.

Although the existing Fermi-2 simulator has been used for operator training since 1984, DECo decided to upgrade this simulator to meet the simulation facility requirements of the May 1987 revision of 10 CFR Part 55. The simulator upgrade project consisted of using the existing simulator control room panels and adding new computer hardware and software to drive the simulation and a new instructor's station.

According to DECo's original schedule, which was included in a letter to the NRC dated January 17, 1989, three major milestones were to occur in 1990. These were the upgrade of the dynamic process models, the upgrade of the control logic models, and the integration of hardware and software. The dynamic process and control logic model development milestones were completed on time in September 1990. However, during the process of hardware and

software integration, several technical problems emerged that affected the schedule. Among these problems were the inability to achieve steady-state full power conditions and a problem involving the response time of some of the panel input/output devices. After performing a review of the simulator upgrade project, DECo informed the NRC by letter dated December 28, 1990, that the upgraded Fermi-2 simulator could not be certified by March 26, 1991.

The only operating tests currently scheduled during the proposed exemption period are for licensed operator requalification. These tests are scheduled for August of 1991 and the NRC will be participating. The next operating tests are also for operator requalification and are scheduled for December of 1991. The NRC will again be participating.

DECo intends to use the existing Fermi-2 simulator for the August and December 1991 operating tests. The existing Fermi-2 simulator was used for NRC-administered operating tests in December of 1990. Six candidates for upgrading their Reactor Operator (RO) licenses to Senior Reactor Operator (SRO) licenses and one licensed SRO requalification candidate were evaluated using the existing Fermi-2 simulator. No problems with the existing simulator were observed during these operating tests.

III.

The Commission has determined, pursuant to 10 CFR 55.11, that the exemption is authorized by law and will not endanger life or property and is otherwise in the public interest. Furthermore, the Commission has determined, pursuant to 10 CFR 50.12(a), that special circumstances of 10 CFR 50.12(a)(2)(v) are applicable in that the exemption would provide only temporary relief from the applicable regulations and the licensee has

made good faith efforts to comply with the regulations. The exemption grants a temporary relief period of nine months from the March 1991 date for submittal of the Fermi-2 simulation facility certification and allows the licensee to use the existing Fermi-2 simulator for the simulation facility portion of operating tests until the upgraded Fermi-2 simulator is certified. Good faith efforts to comply with the regulations were made as follows:

- (1) The existing Fermi-2 simulator became operational in 1984.
- (2) In December 1988, a procurement specification for the upgrade of the process models, the instructor station, and the simulator computers was issued to prospective bidders.
- (3) On June 30, 1989, DECo awarded a contract to a simulator vendor for the upgrade of the Fermi-2 simulator.
- (4) In September 1990, the dynamic process and control logic model development milestones were completed on schedule.
- (5) By letter dated December 28, 1990, DECo informed the NRC that the simulator certification milestones would not be completed by March 26, 1991, as originally planned, primarily because the vendor was unable to meet the software and hardware integration milestone.
- (6) DECo intends to certify the upgraded Fermi-2 simulator by December 31, 1991, and to use it for all subsequent operating tests.

IV.

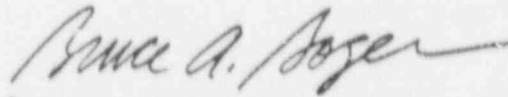
Accordingly, the Commission hereby grants an exemption from the schedular requirements of 10 CFR 55.45(b)(2)(iii) for submittal of NRC Form-474, "Simulation Facility Certification." Furthermore, the Commission hereby

grants an exemption from the requirement of 10 CFR 55.45(b)(2)(iv), for administration of the simulation facility portion of operating tests only on certified or approved simulation facilities after May 26, 1991, to allow DECo to use the existing Fermi-2 simulator until the upgraded Fermi-2 simulator is certified.

Pursuant to 10 CFR 51.32, the Commission has determined that the granting of this Exemption will have no significant impact on the quality of the human environment (56 FR 12564).

This Exemption is effective upon issuance and expires on December 31, 1991.

FOR THE NUCLEAR REGULATORY COMMISSION



Bruce A. Boger, Director
Division of Reactor Projects III/IV/V
Office of Nuclear Reactor Regulation

Dated at Rockville, Maryland
this 26th day of March 1991

grants an exemption from the requirement of 10 CFR 55.45(b)(2)(iv), for administration of the simulation facility portion of operating tests only on certified approved simulation facilities after May 26, 1991, to allow DECo to use the existing Fermi-2 simulator until the upgraded Fermi-2 simulator is certified.

Pursuant to 10 CFR 51.32, the Commission has determined that the granting of this Exemption will have no significant impact on the quality of the human environment (56 FR 12564).

This Exemption is effective upon issuance and expires on December 31, 1991.

FOR THE NUCLEAR REGULATORY COMMISSION

/s/

Bruce A. Boger, Director
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Dated at Rockville, Maryland
this 26th day of March 1991

LA/DP31:DRP345
PSMUNTEWORTH
03/22/91

BRW
03/22/91

PM/PD31:DRP345
JSTAN
03/22/91

ADR3:DRP345
JZWOLINSKI
03/26/91

OLB
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SUPPORTS

D/PD31:DRP345
LMARSH
03/24/91

D:DRP345
BBOGER
03/26/91