Docket No. 50-341

Mr. B. Ralph Sylvia Senior Vice President - Nuclear Operations Detroit Edison Company 6400 North Dixie Highway Newport, Michigan 48166

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Dear Mr. Sylvia:

SUBJECT: AMENDMENT NO. 36 TO FACILITY OPERATING LICENSE NO. NPF-43: (TAC NO. 72983)

The Commission has issued the enclosed Amendment No. 36 to Facility Operating License No. NPF-43 for the Fermi-2 facility. This amendment consists of changes to the Plant Technical Specifications (TS) in response to your letter dated April 3, 1989.

The amendment revises the TS relating to the Source Range Monitors (SRM) to permit complete core off-loading during the first refueling outage. The proposed amendment also increases the minimum signal-to-noise ratio required for a reduced SRM minimum count rate requirement and eliminates a related TS provision which is no longer needed. The associated Bases are also revised.

A copy of the related Safety Evaluation and Notice of Issuance are enclosed.

Sincerely,

unginal signed by

John F. Stang, Project Manager Project Directorate III-1 Division of Reactor Projects - III, IV, V & Special Projects Office of Nuclear Reactor Regulation

Enclosures: 1.

- Amendment No. 36 to NPF-43 2. Safety Evaluation

3. Notice of Issuance

cc w/enclosures: See next page

FERMI 2 AMEND. TAC 72983

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UNITED STATES VUCLEAR REGULATORY COMMISSION WASHINGTON, D. C. 20555 August 30, 1989

Docket No. 50-341

Mr. B. Ralph Sylvia Senior Vice President - Nuclear Operations Detroit Edison Company 6400 North Dixie Highway Newport, Michigan 48166

Dear Mr. Sylvia:

SUBJECT: AMENDMENT NO. 36 TO FACILITY OPERATING LICENSE NO. NPF-43: (TAC NO. 72983)

The Commission has issued the enclosed Amendment No. 36 to Facility Operating License No. NPF-43 for the Fermi-2 facility. This amendment consists of changes to the Plant Technical Specifications (TS) in response to your letter dated April 3, 1989.

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John F. Stang, Project Manager Project Directorate III-1 Division of Reactor Projects - III, IV, V & Special Projects Office of Nuclear Reactor Regulation

Enclosures:

1. Amendment No. 36 to NPF-43

- 2. Safety Evaluation
- 3. Notice of Issuance

cc w/enclosures: See next page Mr. B. Ralph Sylvia Detroit Edison Company

cc:

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John Flynn, Esq. Senior Attorney Detroit Edison Company 2000 Second Avenue Detroit, Michigan 48226

Nuclear Facilities and Environmental Monitoring Section Office Division of Radiological Health P. O. Box 30035 Lansing, Michigan 48909

Mr. Walt Rogers U.S. Nuclear Regulatory Commission Resident Inspector's Office 6450 W. Dixie Highway Newport, Michigan 48166

Monroe County Office of Civil Preparedness 963 South Raisinville Monroe, Michigan 48161

Regional Administrator, Region III U.S. Nuclear Regulatory Commission 799 Roosevelt Road Glen Ellyn, Illinois 60137 Fermi-2 Facility

Ms. Lynn Goodman Supervisor - Licensing Detroit Edison Company Fermi Unit 2 6400 North Dixie Highway Newport, Michigan 48166



DETROIT EDISON COMPANY

WOLVERINE POWER SUPPLY COOPERATIVE, INCORPORATED

DOCKET NO. 50-341

FERMI-2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 36 License No. NPF-43

- 1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by the Detroit Edison Company (the licensee) dated April 3, 1989, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.
- Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment and paragraph 2.C.(2) of Facility Operating License No. NPF-43 is hereby amended to read as follows:

Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 36, and the Environmental Protection Plan contained in Appendix B, are hereby incorporated in the license. DECo shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

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FOR THE NUCLEAR REGULATORY COMMISSION

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John O. Thoma, Acting Director Project Directorate III-1 Division of Reactor Projects - III, IV, V & Special Projects -Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical Specifications

Date of Issuance: August 30, 1989

ATTACHMENT TO LICENSE AMENDMENT NO. 36

FACILITY OPERATING LICENSE NO. NPF-43

DOCKET NO. 50-341

Replace the following pages of the Appendix "A" Technical Specifications with the attached pages. The revised pages are identified by Amendment number and contain a vertical line indicating the area of change. The corresponding overleaf pages are also provided to maintain document completeness.

REMOVE	INSERT		
3/4 3-44	3/4 3-44		
3/4 3-64	3/4 3-64		
3/4 9-3	3/4 9-3		
3/4 9-4	3/4 9-4		
B 3/4 9-1	B 3/4 9-1		

TABLE 3.3.6-2

CONTROL ROD BLOCK INSTRUMENTATION SETPOINTS

ÑΑ

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NA

ÑΑ

NA

NA

ÑΑ

> 3 cps**

full scale

full scale

< 589'11½"

TRIP FUNCTION

APRM

с.

d.

d.

b.

d.

a. Upscale

ROD BLOCK MONITOR

b. Inoperative

b. Inoperative

b. Upscale

c. Inoperative

Upscale

c. Inoperative

Downscale

SCRAM DISCHARGE VOLUME

a. Water Level-High

b. Scram Trip Bypass

Downscale

Downscale

SOURCE RANGE MONITORS

a. Detector not full in

INTERMEDIATE RANGE MONITORS

a. Detector not full in

a. Flow Biased Neutron Flux - High

Neutron Flux - Upscale, Setdown

REACTOR COOLANT SYSTEM RECIRCULATION FLOW

c. Downscale

TRIP SETPOINT

< 0.66 W + 40%

< 0.66 W + 42%

 $< 1.0 \times 10^{5} \text{ cps}$

< 108/125 divisions of

> 5/125 divisions of

> 5% of RATED THERMAL POWER

 \geq 5% of RATED THERMAL POWER \leq 12% of RATED THERMAL POWER

ALLOWABLE VALUE

< 0.66 W + 43% $$\overline{\rm N}{\rm A}$$ > 3% of RATED THERMAL POWER

 \leq 0.66 W + 45%* $$\rm NA$$ \geq 3% of RATED THERMAL POWER \leq 14% of RATED THERMAL POWER

NA < 1.6 x 10⁵ cps NA ≥ 2 cps**

NA < 110/125 divisions of full scale NA > 3/125 divisions of full scale

< 591'0" NA

	a. Upscale b. Inoperative c. Comparator	$<$ 108/125% of rated flow NA \leq 10% flow deviation	< 111/125% of rated flow NA < 11% flow deviation
7.	REACTOR MODE SWITCH SHUTDOWN POSITION	NA	ΝΑ

*The APRM rod block function is varied as a function of recirculation loop drive flow (W). The trip setting of this function must be maintained in accordance with Specification 3.2.2.

**May be reduced to ≥ 0.7 cps provided the signal-to-noise ratio is > 20.

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UNIT

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1.

2.

3.

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5.

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Amendment No.

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INSTRUMENTATION

SOURCE RANGE MONITORS

LIMITING CONDITION FOR OPERATION

3.3.7.6 At least the following source range monitor channels shall be OPERABLE:

- a. In OPERATIONAL CONDITION 2*, three.
- b. In OPERATIONAL CONDITIONS 3 and 4, two.

APPLICABILITY: OPERATIONAL CONDITIONS 2*, 3, and 4.

ACTION:

- a. In OPERATIONAL CONDITION 2* with one of the above required source range monitor channels inoperable, restore at least 3 source range monitor channels to OPERABLE status within 4 hours or be in at least HOT SHUTDOWN within the next 12 hours.
- b. In OPERATIONAL CONDITION 3 or 4 with one or more of the above required source range monitor channels inoperable, verify all insertable control rods to be inserted in the core and lock the reactor mode switch in

the Shutdown position within 1 hour.

SURVEILLANCE REQUIREMENTS

4.3.7.6 Each of the above required source range monitor channels shall be demonstrated OPERABLE by:

- a. Performance of a:
 - 1. CHANNEL CHECK at least once per:
 - a) 12 hours in CONDITION 2*, and
 - b) 24 hours in CONDITION 3 or 4.
 - CHANNEL CALIBRATION** at least once per 18 months.
- b. Performance of a CHANNEL FUNCTIONAL TEST:
 - 1. Within 24 hours prior to moving the reactor mode switch from the Shutdown position, if not performed within the previous 7 days, and
 - 2. At least once per 31 days.
- c. Verifying, prior to withdrawal of control rods, that the SRM count rate is at least > 3*** cps with the detector fully inserted.

*With IRM's on range 2 or below.

***May be reduced to > 0.7 cps provided signal-to-noise ratio is ≥ 20 .

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Amendment No. 36

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^{**}Neutron detectors may be excluded from CHANNEL CALIBRATION.

INST	RUMENT	CHANNEL CHECK	CHANNEL CALIBRATION	APPLICABLE OPERATIONAL CONDITIONS
1.	Reactor Vessel Pressure	М	R	1, 2
2.	Reactor Vessel Water Level, Fuel Zone	М	R	1, 2
3.	Suppression Chamber Water Level	М	R	1, 2
4.	Suppression Chamber Water Temperature	М	R	1, 2
5.	Suppression Chamber Air Temperature	М	R	1, 2
6.	Suppression Chamber Pressure	М	R	1, 2
7.	Drywell Pressure, Wide Range	М	R	1, 2
8.	Drywell Air Temperature	М	R	1, 2
9.	Drywell Oxygen Concentration	М	R	1, 2
10.	Drywell Hydrogen Concentration	М	Q*	1, 2
11.	Safety/Relief Valve Position Indicators	М	R	1, 2
12.	Containment High Range Radiation Monitor	М	R**	1, 2, 3
13.	Standby Gas Treatment System Radiation Monitors***	М	R	1, 2, 3
14.	Neutron Flux	М	R	1, 2
15.	Drywell Sump Level	М	R	1, 2
16.	Primary Containment Isolation Valve Position	М	. R	1, 2, 3

TABLE 4.3.7.5-1 ACCIDENT MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

*Using sample gas containing:

a. One volume percent hydrogen, balance nitrogen.

b. Four volume percent hydrogen, balance nitrogen.

**CHANNEL CALIBRATION shall consist of an electronic calibration of the channel, not including the detector, for range decades above 10 R/hr and a one point calibration check of the detector below 10 R/hr with an installed or portable gamma source.

*****High (accident)** range noble gas monitors.

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REFUELING OPERATIONS

3/4.9.2 INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.9.2 At least 2 source range monitor* (SRM) channels shall be OPERABLE and inserted to the normal operating level with:

- a. Annunciation and continuous visual indication in the control room,
- b. One of the required SRM detectors located in the quadrant where CORE ALTERATIONS are being performed and the other required SRM detector located in an adjacent quadrant, and
- c. Unless adequate shutdown margin has been demonstrated per Specification 3.1.1, the "shorting links" shall be removed from the RPS circuitry prior to and during the time any control rod is withdrawn[#].

APPLICABILITY: OPERATIONAL CONDITION 5.

ACTION:

With the requirements of the above specification not satisfied, immediately suspend all operations involving CORE ALTERATIONS and insert all insertable control rods.

SURVEILLANCE REQUIREMENTS

4.9.2 Each of the above required SRM channels shall be demonstrated OPERABLE by:

- a. At least once per 12 hours:
 - 1. Performance of a CHANNEL CHECK,
 - 2. Verifying the detectors are inserted to the normal operating level, and
 - During CORE ALTERATIONS, verifying that the detector of an OPERABLE SRM channel is located in the core quadrant where CORE ALTERATIONS are being performed and another is located in an adjacent quadrant.

^{*}Maintenance of a minimum count rate for these channels is not required when sixteen or fewer fuel assemblies, each of which are installed in one of the four positions directly adjacent to one of the four permanently installed SRM nuclear detectors (four fuel assemblies surrounding each SRM detector), are in the core. SRM minimum count rate requirements apply for any CORE ALTERATION involving any other fuel assembly. The use of special movable detectors during CORE ALTERATIONS in place of the normal SRM detectors is permissible as long as these special detectors are connected to the normal SRM circuits.

[#]Not required for control rods removed per Specification 3.9.10.1 and 3.9.10.2. FERMI - UNIT 2 3/4 9-3 //mendment No. 36

REFUELING OPERATIONS

SURVEILLANCE REQUIREMENTS (Continued)

- b. Performance of a CHANNEL FUNCTIONAL TEST:
 - 1. Within 24 hours prior to the start of CORE ALTERATIONS, and
 - 2. At least once per 7 days.
- c. Verifying that the channel count rate is at > 3* cps:
 - 1. Prior to control rod withdrawal,
 - 2. Prior to and at least once per 12 hours during CORE ALTERATIONS, and
 - 3. At least once per 24 hours.
- d. Verifying, within 8 hours prior to and at least once per 12 hours during, that the RPS circuitry "shorting links" have been removed during the time any control rod is withdrawn** unless adequate shutdown margin has demonstrated per Specification 3.1.1.

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^{*}May be reduced to > 0.7 cps provided the signal-to-noise ratio is > 20. Maintenance of a minimum count rate for these channels is not required when sixteen or fewer fuel assemblies, each of which are installed in one of the four positions directly adjacent to one of the four permanently installed SRM nuclear detectors (four fuel assemblies surrounding each SRM detector), are in the core. SRM minimum count rate requirements apply for any CORE ALTERATION involving any other fuel assembly.

^{**}Not required for control rods removed per Specification 3.9.10.1
 or 3.9.10.2.

3/4.9 REFUELING OPERATIONS

BASE

3/4.9.1 REACTOR MODE SWITCH

Locking the OPERABLE reactor mode switch in the Shutdown or Refuel position, as specified, ensures that the restrictions on control rod withdrawal and refueling platform movement during the refueling operations are properly activated. These conditions reinforce the refueling procedures and reduce the probability of inadvertent criticality, damage to reactor internals or fuel assemblies, and exposure of personnel to excessive radioactivity.

3/4.9.2 INSTRUMENTATION

The OPERABILITY of at least two source range monitors, one located in the quadrant where CORE ALTERATIONS are being performed and the other located in an adjacent quadrant, ensures reactivity monitoring capability is available to detect changes in the reactivity condition of the core. The SRM in the adjacent quadrant provides a back-up to the SRM in the quadrant where CORE ALTERATIONS are being performed whenever a continuous multiplying medium exists between the location of CORE ALTERATIONS and the SRM. The minimum count rate is not required when sixteen or fewer fuel assemblies, each directly adjacent to a permanently installed SRM nuclear detector, are in the core. This provision allows complete core unloading without the use of special movable detectors. During core re-loading up to four irradiated fuel assemblies are placed next to each SRM detector to produce greater than the minimum count rate. Fuel loading patterns are chosen such that each set of contiguous fuel assemblies surrounds at least one SRM detector. This ensures a continuous multiplying medium is established between at least one SRM detector and the location of CORE ALTERATIONS thus enhancing the ability of the SRMs to respond to any abnormal reactivity increase.

3/4.9.3 CONTROL ROD POSITION

The requirement that all control rods be inserted during other CORE ALTERATIONS ensures that fuel will not be loaded into a cell without a control rod.

3/4.9.4 DECAY TIME

The minimum requirement for reactor subcriticality prior to fuel movement ensures that sufficient time has elapsed to allow the radioactive decay of the short lived fission products. This decay time is consistent with the assumptions used in the accident analyses.

3/4.9.5 COMMUNCIATIONS

The requirement for communications capability ensures that refueling station personnel can be promptly informed of significant changes in the facility status or core reactivity condition during movement of fuel within the reactor pressure vessel.

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Amendment No. 36

REFUELING OPERATIONS

BASES

3/4.9.6 REFUELING PLATFORM

The OPERABILITY requirements ensure that (1) the refueling platform will be used for handling control rods and fuel assemblies within the reactor pressure vessel, (2) each crane and hoist has sufficient load capacity for handling fuel assemblies and control rods, and (3) the core internals and pressure vessel are protected from excessive lifting force in the event they are inadvertently engaged during lifting operations.

3/4.9.7 CRANE TRAVEL - SPENT FUEL STORAGE POOL

The restriction on movement of loads in excess of the nominal weight of a fuel assembly over other fuel assemblies in the storage pool ensures that in the event this load is dropped (1) the activity release will be limited to that contained in a single fuel assembly, and (2) any possible distortion of fuel in the storage racks will not result in a critical array. This assumption is consistent with the activity release assumed in the safety analyses.

3/4.9.8 and 3/4.9.9 WATER LEVEL - REACTOR VESSEL and WATER LEVEL - SPENT FUEL STORAGE POOL

The restrictions on minimum water level ensure that sufficient water depth is available to remove 99% of the assumed 10% iodine gap activity released from the rupture of an irradiated fuel assembly. This minimum water depth is consistent with the assumptions of the safety analysis.

3/4.9.10 CONTROL ROD REMOVAL

These specifications ensure that maintenance or repair of control rods or control rod drives will be performed under conditions that limit the probability of inadvertent criticality. The requirements for simultaneous removal of more than one control rod are more stringent since the SHUTDOWN MARGIN specification provides for the core to remain subcritical with only one control rod fully withdrawn.

3/4.9.11 RESIDUAL HEAT REMOVAL AND COOLANT CIRCULATION

The requirement that at least one shutdown cooling mode loop be OPERABLE or that an alternate method capable of decay heat removal be demonstrated and that an alternate method of coolant mixing be in operation ensures that 1) sufficient cooling capacity is available to remove decay heat and maintain the water in the reactor pressure vessel below 140°F as required during REFUELING, and 2) sufficient coolant circulation would be available through the reactor core to assure accurate temperature indication and to distribute and prevent stratification of the poison in the event it becomes necessary to actuate the standby liquid control system.

The requirement to have two shutdown cooling mode loops OPERABLE when there is less than 20 feet 6 inches of water above the reactor vessel flange ensures that a single failure of the operating loop will not result in a complete loss of residual heat removal capability. With the reactor vessel head removed and 20 feet 6 inches of water above the reactor vessel flange, a large heat sink is available for core cooling. Thus, in the event of a failure of the operating RHR loop, adequate time is provided to initiate alternate methods capable of decay h.st removal or emergency procedures to cool the core.

FERMI - UNIT 2



UNITED STATES NUCLEAR REGULATORY COMMISSION WASHINGTON, D. C. 20555

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 36 TO FACILITY OPERATING LICENSE NO. NPF-43

DETROIT EDISON COMPANY

WOLVERINE POWER SUPPLY COOPERATIVE, INCORPORATED

FERMI-2

DOCKET NO. 50-341

1.0 INTRODUCTION

By letter dated April 3, 1989, the Detroit Edison Company (DECo or the licensee) requested amendment to the Technical Specifications (TS) appended to Facility Operating License No. NPF-43 for Fermi-2. The proposed amendment would revise the TS by changing the current requirement of TS 3.9.2 relating to the Source Range Monitors (SRM) to permit complete core off-loading during the first refueling outage. The proposed amendment also increases the minimum signal-to-noise ratio required for a reduced SRM minimum count rate requirement and eliminates a related TS provision which is no longer needed. The associated Bases are also revised.

2.0 EVALUATION

Detroit Edison has scheduled the first refueling outage for Fermi-2 to begin during September 1989. During the outage, complete core off-loading is planned in order to more efficiently complete and accommodate refueling outage work. The removal of the assemblies adjacent to the Source Range Monitors (SRMs), which are the last fuel assemblies to be removed, would cause the loss of SRM detector count rate. This is contrary to the requirements of Specification 3/4.9.2, Surveillance Requirement 4.9.2.c, which requires a minimum SRM detector count rate be maintained at all times during CORE ALTERATIONS. The proposed amendment requests a revision to the requirement for a minimum SRM count rate so that when 16 or fewer fuel assemblies, each of which are installed in 1 of the 4 positions directly adjacent to 1 of the 4 permanently installed SRM nuclear detectors fuel assemblies (4 fuel assemblies surrounding each SRM detector), are in the core the minimum SRM count rate requirement does not apply. The proposed change is necessary to allow complete core off-loading.

Part of the proposed changes are directed at the Limiting Conditions for Operation for core monitoring during core alterations, and addresses Source Range Monitoring (SRM) operability, via count rate, and fuel assembly loading limits. It specifically involves Specification 3/4.9.2 and the related Bases. During reload operations the Technical Specifications require minimum count rate levels to be met by the SRM. During reload operations in a BWR in which the entire core is to be unloaded, especially if sources are not present,

9909110004 890830 PDR ADOCK 05000341 PDC PDC there may be times, when there are few fuel assemblies in the core, when this minimum cannot be met with the usual SRM. The current Technical Specification requirements are based upon the use of "Special Movable Detectors" connected to the "normal SRM circuits." Experience at other BWR stations indicates that these "Special Movable Detectors," i.e., "Fuel Loading Chambers" (FLCs) do not function as originally anticipated. Experience has shown that the FLCs produce signal variations because of the lack of fixed core geometry during refueling operations and tend to saturate because of gamma flux. Further, because the FLCs are attached in a temporary manner to facilitate ease of relocation, their use increases the risk of dropping them into the vessel. The FLCs have been found to be unreliable, and increase the probability of having a loose object fall in the reactor.

The proposed amendment would allow the licensee to go below the required SRM count rate when there are not more than four fuel assemblies in each core quadrant, loaded around each of the four SRM positions for either loading or unloading operations. For example, for a reload in which all fuel assemblies and normal sources have been removed from the core, they first load up to four (as necessary) irradiated assemblies next to each of the four SRM locations, without necessarily meeting the required count rate until this loading is finished. The loading would then continue and would have to meet the usual counting rate requirement. General Electric has calculated that the configuration of (any GE) four assemblies (2x2 array) at the maximum reactivity condition (as a function of burnup), without control rods inserted and separated from other assemblies by a distance of two fuel cells, would have a k_{eff} of less than 0.95. Thus, the above configuration is well below a subcritical level.

The refueling system interlocks continue to be required during all CORE ALTERATIONS, including those involving the 16 fuel assemblies directly adjacent to the permanently installed SRM nuclear detectors, which are proposed to be allowed with the SRM count rate below minimum. These interlocks, along with the associated refueling procedures, provide additional assurance that inadvertent criticality does not occur during proposed operations with SRM count rate below minimum. These interlocks and procedures ensure the control rods are and remain inserted during such operations. The refueling interlocks are not affected by the loss of SRM channels due to loss of minimum count rate.

The reactor period circuit provides indication and alarm functions for the rate of change of reactor power as measured by the SRM. These functions are designed to provide operational information during reactor startup. Therefore, the impact on the reactor period functions of the SRM system from allowing SRM count rate to fall below the minimum requirement during certain CORE ALTERATIONS is not of concern.

The SRM rod block functions are provided to ensure that when necessary SRM indication exists prior to rod withdrawal. These rod block functions are required to be OPERABLE per Specification 3.3.6 in OPERATIONAL CONDITION 5. Although this proposal exempts the SRM channels from minimum count rate requirements during certain CORE ALTERATIONS, the rod block functions are still required. The SRM downscale rod block will actuate and provide additional assurance that rod motion does not occur without SRM monitoring capability. Therefore, the impact of the change on the SRM rod block functions is not of concern.

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In summary, the proposed changes which allow core off-loading and reloading without the use of FLCs will result in improved safety based on the following:

- o The SRMs are more reliable than FLCs
- The risk of dropping loose objects into the reactor is reduced by eliminating the use of FLCs
- o The elimination of the SRM count rate requirement when there are 16 or fewer fuel assemblies, each of which are installed in 1 of the 4 positions directly adjacent to 1 of the 4 permanently installed SRM nuclear detectors (4 fuel assemblies surrounding each SRM detector), installed in the core does not, as discussed above, result in degradation of any feature necessary for safety.

The Technical Specification requirements for minimum count rate specify that a count rate of at least 3 counts per second (cps) be present unless a signal-to-noise (S/N) ratio of greater than 2 exists, in which case 0.7 cps is the specified minimum count rate. Recent studies by General Electric have indicated that an S/N ratio of at least 20 is required to reduce the minimum count rate to 0.7 cps. The increased S/N ratio is necessary to maintain the original level of source range monitoring uncertainty assumed by a 3 cps minimum count rate. Based upon the above, Detroit Edison is proposing to increase the S/N ratio necessary for a minimum SRM count rate requirement of 0.7 cps to 20. This change will return the plant to the original design bases and UFSAR requirements. Further, the change provides a more conservative S/N ratio requirement in that, as proposed, a much greater S/N ratio will be required than is presently.

Amendment 1 to the TS provided special provisions to reduce the minimum count rate requirements to facilitate replacement of the start-up neutron sources. These requirements were effective only prior to achieving a burnup of 2000 MWD/T on the first core. Since the effective period for these provisions has expired, the proposed amendment will eliminate the expired Amendment No. 1 provisions. This change is strictly administrative in nature and therefore the staff finds it acceptable.

Finally, the proposed amendment will reword the TS Sections 4.3.7.6.C and 4.9.2.C with the 3 cps requirements specified in the surveillance requirements of the specification and the 0.7 cps provision being included in a footnote. This change provides clarification and is strictly an administrative change to the TS.

Based on the above evaluation, the staff finds that the proposed changes to the TS are acceptable.

3.0 ENVIRONMENTAL CONSIDERATION

. ..

. . .

Pursuant to 10 CFR 51.21, 51.32 and 51.35, an environmental assessment and finding of no significant impact have been prepared and published in the <u>Federal Register</u> on August 29, 1989 (54 FR 35735). Accordingly, based upon the environmental assessment, we have determined that the issuance of this amendment will not have a significant effect on the quality of the human environment.

4.0 CONCLUSION

We have concluded, based on the considerations discussed above, that (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (2) such activities will be conducted in compliance with the Commission's regulations, and the issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public.

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Principal Contributor: John Stang

Date: August 30, 1939

UNITED STATES NUCLEAR REGULTORY COMMISSION DETROIT EDISON COMPANY WOLVERINE POWER SUPPLY COOPERATIVE, INC. DOCKET NO. 50-341 NOTICE OF ISSUANCE OF AMENDMENT TO FACILITY OPERATING LICENSE

The U.S. Nuclear Regulatory Commission (Commission) has issued Amendment No. 36 to Facility Operating License No. NPF-43 issued to Detroit Edison Company (the licensee), which revised the Technical Specifications for operation of Fermi-2, located in Monroe County, Michigan.

The amendment is effective as of the date of issuance.

The amendment revises the Technical Specification (TS) relating to the Source Range Monitors (SRM) to permit complete core off-loaading during the first refueling outage. The proposed amendment also increases the minimum signal-to-noise ratio required for a reduced SRM minimum count rate requirement and eliminates a related TS provision which is no longer needed.

The application for the amendment complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations. The Commission has made appropriate findings as required by the Act and the Commission's rules and regulations in 10 CFR Chapter I, which are set forth in the license amendment.

Notice of Consideration of Issuance of Amendment and Opportunity for Hearing in connection with this action was published in the FEDERAL REGISTER on July 11, 1989 (54 FR 29117). No request for a hearing or petition for leave to intervene was filed following this notice.

909110006 890830 DR ADOCK 05000341 The Commission has prepared an Environmental Assessment related to the action and has determined not to prepare an environmental impact statement. Based upon the environmental assessment, the Commission has concluded that the issuance of this amendment will not have a significant effect on the quality of the human behavior environment.

For further details with respect to the action, see (1) the application for amendment dated April 3, 1989, (2) Amendment No. to License No. NPF-43, (3) the Commission's related Safety Evaluation, and (4) the Commission's Environmental Assessment. All of these items are available for public inspection at the Commission's Public Document Room, the Gelman Building, 2120 L Street, N.W., Washington, D.C., and at the Local Public Document Room. A copy of items (2), (3) and (4) may be obtained upon request addressed to the U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, Attention: Director, Division of Reactor Projects III, IV, V and Special Projects.

Dated at Rockville, Maryland, this 30th day of August 1989.

FOR THE NUCLEAR REGULATORY COMMISSION

Oohn F. Stang, Project Manager Project Directorate III-1 Division of Reactor Projects - III, IV, V and Special Projects Office of Nuclear Reactor Regulation