



Commonwealth Edison

One First National Plaza, Chicago, Illinois
Address Reply to: Post Office Box 767
Chicago, Illinois 60690

August 23, 1983

Mr. Harold R. Denton, Director
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Subject: LaSalle County Station Unit 2
Specific Requests for Unit 2
Technical Specifications
NRC Docket No. 50-374

Dear Mr. Denton:

During recent telecons with Mr. D. Hoffman and others of your staff regarding Unit 2 Technical Specifications, it was stated that the licensee should docket certain technical information related to our discussions.

Enclosed please find the following technical packages:

1. AC/DC Sources Required in Unit 1 for Unit 2 Operation.
2. Single Loop Recirculation Unit 2 Technical Specifications.
3. MCPR Operating Limit Without EOC-RPT Unit 2 Technical Specification.

To the best of my knowledge and belief the statements contained herein and in the attachment are true and correct. In some respects these statements are not based on my personal knowledge but upon information furnished by other Commonwealth Edison and contractor employees. Such information has been reviewed in accordance with Company practice and I believe it to be reliable.

Enclosed please find one signed original and forty (40) copies of this letter and the enclosures.

If there are any further questions in this matter, please contact this office.

Very truly yours,

C. W. Schroeder 8/23/83
C. W. Schroeder

Nuclear Licensing Administrator

lm

cc: Don Hoffman/1 Fed. Express
NRC Resident Inspector - LSCS

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SUBJECT: AC/DC sources required in Unit 1 for Unit 2 operation.

REFERENCE Unit 2 Technical Specification pages 3/4 8-10, 3/4 8-14, 3/4 8-15, 3/4 8-17.

BACKGROUND

The Draft Technical Specification pages for LaSalle County Station Unit 2 listed in the references contain AC and DC power supplies for Division 1 of Unit 1 which do not supply any power requirements to Unit 2 required equipment.

DISCUSSION

On the referenced pages the following Unit 1 electrical distribution buses are not required to supply power to any Unit 2 required equipment:

480 volt bus 135X.

480 volt MCC's 135X-2 and 135X-3.

120 volt A.C. distribution panels in 480 volt MCC's 135X-2 and 135X-3.

125 volt battery 1A

125 volt battery charger 1A

125 volt distribution panel 111Y

The only required Unit 1 division 1 power source is 4160 volt bus 141Y which can supply a second source of off site AC power through the unit cross tie breakers if manually aligned. The above required equipment need not be operable per Technical Specification requirements to perform this function.

We therefore request that these changes be incorporated in the LaSalle County Station Unit 2 Technical Specifications prior to the issuance of the operating license.

DRAFT

ELECTRICAL POWER SYSTEMS

3/4.8.2 ONSITE POWER DISTRIBUTION SYSTEMS

A. C. DISTRIBUTION - OPERATING

LIMITING CONDITION FOR OPERATION

3.8.2.1 The following A.C. distribution system electrical divisions shall be OPERABLE and energized:

a. Division 1, consisting of;

1. 4160 volt bus 241Y.
2. 480 volt buses 235X and 235Y.
3. 480 volt MCC's 235X-1, 235X-2, 235X-3, 235Y-1 and 235Y-2.
4. 120 volt A.C. distribution panels in 480 volt MCCs 235X-1, 235X-2, 235X-3 and 235Y-1.

b. Division 2, consisting of;

1. 4160 volt bus 242Y.
2. 480 volt buses 236X and 236Y.
3. 480 volt MCC's 236X-1, 236X-2, 236X-3, 236Y-1 and 236Y-2.
4. 120 volt A.C. distribution panels in 480 volt MCCs 236X-1, 236X-2, 236X-3 and 236Y-2.

c. Division 3, consisting of;

1. 4160 volt bus 243.
2. 480 volt MCC 243-1.
3. 120 volt A.C. distribution panels in 480 volt MCC 243-1.

d. Unit 1 Division 1, consisting of;

1. 4160 volt bus 141Y.
- ~~2. 480 volt bus 135X.~~
- ~~3. 480 volt MCC's 135X-2 and 135X-3.~~
- ~~4. 120 volt A.C. distribution panels in 480 volt MCC's 135X-2 and 135X-3.~~

e. Unit 1 Division 2, consisting of;

1. 4160 volt bus 242Y.
2. 480 volt buses 136X and 136Y.
3. 480 volt MCC's 136X-1, 136X-2, 136X-3, 136Y-1, and 136Y-2.
4. 120 volt A.C. distribution panels in 480 volt MCC's 136X-1, 136X-2, 136X-3, and 136Y-2.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2 and 3.

ELECTRICAL POWER SYSTEMSD.C. DISTRIBUTION - OPERATINGLIMITING CONDITION FOR OPERATION

3.8.2.3 The following D.C. distribution system electrical divisions shall be OPERABLE and energized:

- a. Division 1, consisting of;
 - 1. 125 volt battery 2A.
 - 2. 125 volt full capacity charger.
 - 3. 125 volt distribution panel 211Y.
- b. Division 2, consisting of;
 - 1. 125 volt battery 2B.
 - 2. 125 volt full capacity charger.
 - 3. 125 volt distribution panel 212Y.
- c. Division 3, consisting of;
 - 1. 125 volt battery 2C.
 - 2. 125 volt full capacity charger.
 - 3. 125 volt distribution panel 213.
- ~~d. Unit 1 Division 1, consisting of;~~
 - ~~1. 125 volt battery 1A.~~
 - ~~2. 125 volt full capacity charger.~~
 - ~~3. 125 volt distribution panel 111Y.~~
- e. Unit 1 Division 2, consisting of;
 - 1. 125 volt battery 1B.
 - 2. 125 volt full capacity charger.
 - 3. 125 volt distribution panel 112Y.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2 and 3.

ACTION:

- a. With either Division 1 or Division 2 inoperable or not energized, restore the inoperable division to OPERABLE and energized status within 2 hours or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.
- b. With Division 3 inoperable or not energized, declare the HPCS system inoperable and take the ACTION required by Specification 3.5.1.

LIMITING CONDITION FOR OPERATION (Continued)ACTION: (Continued)

- c. With ~~either Unit 1 Division 1 or Unit 1 Division 2~~ inoperable or not energized, restore the inoperable division to OPERABLE and energized status within 7 days or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.
- d. ~~With both Unit 1 Division 1 and Unit 1 Division 2 inoperable or not energized, restore at least one of the inoperable divisions to OPERABLE status within 2 hours or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.~~

SURVEILLANCE REQUIREMENTS

4.8.2.3.1 Each of the above required D.C. distribution system electrical divisions shall be determined OPERABLE and energized at least once per 7 days by verifying correct breaker alignment, indicated power availability from the charger and battery, and voltage on the panel with an overall voltage of greater than or equal to 125 volts.

4.8.2.3.2 Each 125-volt battery and charger shall be demonstrated OPERABLE:

- a. At least once per 7 days by verifying that:
 - 1. The parameters in Table 4.8.2.3.2-1 meet the Category A limits, and
 - 2. Total battery terminal voltage is greater than or equal to 128 volts on float charge.

SURVEILLANCE REQUIREMENTS (Continued)

- b) Division 2, greater than or equal to:
- 1) ~~488.5~~ amperes for the first ~~60~~ seconds,
 - 2) ~~237.6~~ amperes for the next ~~14~~ minutes,
 - 3) ~~177.6~~ amperes for the next ~~15~~ minutes,
 - 4) ~~141.6~~ amperes for the next ~~30~~ minutes, and
 - 5) ~~54.4~~ amperes for the last ~~180~~ minutes.
- c) Division 3, greater than or equal to:
- 1) ~~58.4~~ amperes for the first ~~60~~ seconds,
 - 2) ~~11.1~~ amperes for the next ~~239~~ minutes.
- d) Unit 1 Division 1, greater than or equal to:
- 1) ~~483.4~~ amperes for the first ~~60~~ seconds,
 - 2) ~~251.2~~ amperes for the next ~~14~~ minutes,
 - 3) ~~227.7~~ amperes for the next ~~15~~ minutes,
 - 4) ~~151.7~~ amperes for the next ~~30~~ minutes, and
 - 5) ~~83.7~~ amperes for the last ~~180~~ minutes.
- d) Unit 1 Division 2, greater than or equal to:
- 1) ~~488.5~~ amperes for the first ~~60~~ seconds,
 - 2) ~~237.6~~ amperes for the next ~~14~~ minutes,
 - 3) ~~177.6~~ amperes for the next ~~15~~ minutes,
 - 4) ~~141.6~~ amperes for the next ~~30~~ minutes, and
 - 5) ~~54.4~~ amperes for the last ~~180~~ minutes.
- e. At least once per 60 months, during shutdown, by verifying that the battery capacity is at least 80% of the manufacturers rating when subjected to a performance discharge test. Once per 60 month interval, this performance discharge test may be performed in lieu of the battery service test.
- f. Annual performance discharge tests of battery capacity shall be given to any battery that shows signs of degradation or has reached 85% of the service life expected for the application. Degradation is indicated when the battery capacity drops more than 10% of rated capacity from its average on previous performance tests, or is below 90% of the manufacturer's rating.

SUBJECT: Single Loop Recirculation Unit 2 Technical Specifications

REFERENCES: (A) LaSalle County Station Unit 2 Potential License Conditions, letter C. W. Schroeder to A. Schwencer dated March 18, 1983.

(B) LaSalle County Station License NPF-11 Amendment Number 11, dated 12/16/82.

BACKGROUND

Reference (b) granted permission for Single loop Recirculation for LaSalle County Station Unit 1. Per reference (A) Commonwealth Edison Company Officially requested the same for LaSalle County Station Unit 2.

DISCUSSION

Single Loop Recirculation is acceptable as provided by the safety evaluation for reference (b) and should be incorporated into the Technical Specifications 3.4.1.1 for LaSalle Unit 2.

We therefore request that these changes be incorporated in the LaSalle County Station Unit 2 Technical Specifications prior to issuance of the operating license.



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

DEC 26 1982

DEC 16 1982

Docket No. 50-373

Mr. Louis O. DelGeorge
Director of Nuclear Licensing
Commonwealth Edison Company
P. O. Box 767
Chicago, Illinois 60690

Dear Mr. DelGeorge:

Subject: Amendment No. 11 to Facility Operating License No. NPF-11 - La Salle
County Station, Unit No. 1

The Nuclear Regulatory Commission has issued the enclosed Amendment No. 11 to Facility Operating License No. NPF-11 for La Salle County Station, Unit 1. This Amendment is in response to your letter dated December 6, 1982, and authorizes operation at La Salle County Station, Unit 1 with one recirculation loop out of service. This single recirculation loop operation is granted for only the first fuel cycle and only up to 50 percent of rated power. Single loop operation at 50 percent of rated power at Browns Ferry, Unit 1 and several other plants, has shown acceptable flow and power characteristics. Although analyses indicate that operation above 50 percent power with one recirculation loop may be safe, the experience at Browns Ferry Unit 1 has caused concern about flow and power oscillations at such power levels. The staff, therefore, may require additional information in this area of stability for approval for single recirculation loop operation beyond the first cycle. It is important to note that the enclosed Amendment adds a license condition requiring a power level reduction and reduced safety system settings to provide an equivalent level of safety for operation with one recirculation loop out of service.

A copy of the related safety evaluation supporting Amendment No. 11 to Facility Operating License NPF-11 is enclosed. Also enclosed is a copy of a related notice which has been forwarded to the Office of the Federal Register for publication.

Sincerely,

for Darrell G. Eisenhut

Darrell G. Eisenhut, Director
Division of Licensing
Office of Nuclear Reactor Regulation

Enclosures:

1. Amendment No. 11 to NPF-11
2. Safety Evaluation Report
3. Federal Register notice

cc w/enclosures:
See next page

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La Salle

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Director of Nuclear Licensing
Commonwealth Edison Company
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Chicago, Illinois 60690

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The Honorable Tom Corcoran
United States House of Representatives
Washington, D. C. 20515

Chairman
Illinois Commerce Commission
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527 East Capitol Avenue
Springfield, Illinois 62706

SAFETY EVALUATION

AMENDMENT NO. 11 TO LICENSE NPF-11

LA SALLE COUNTY STATION, UNIT NO. 1

DOCKET NO. 50-373

1.0 INTRODUCTION

The current La Salle County Station, Unit 1 Technical Specifications do not allow plant operation beyond 12 hours if an idle recirculation loop cannot be returned to service. The ability to operate at reduced power with a single loop is highly desirable from an availability outage planning standpoint in the event that maintenance or component unavailability rendered one loop inoperable.

By letter dated December 6, 1982, Commonwealth Edison Company (CECo) (the licensee) requested changes to the Technical Specification for Single Loop Operation of La Salle, Unit 1. The requested changes would permit Unit 1 to operate at up to 50 percent of rated power with one recirculation loop out of service for unlimited time. While analyses indicate that it may be safe to operate boiling water reactors on a single loop in the range higher than 50 percent of rated power, the experience (reference letter from L. M. Mills, TVA dated March 17, 1980 to H. Denton, NRC) at Browns Ferry, Unit 1 has caused concern about flow and power oscillations. However, because single loop operation at 50 percent of rated power at several plants, including Browns Ferry, Unit 1, has shown acceptable flow and power characteristics, we will permit La Salle, Unit 1 to operate at power levels up to 50 percent of rated power with one loop out of service during its initial fuel cycle. We will request from the licensee any additional information required for permanent approval for single loop operation. If requested, we will also consider operation at a higher power level for La Salle with one recirculation loop out of service after the staff concerns stemming from Browns Ferry, Unit 1 single loop operation, which showed unexpected variation in jet pump flow and neutron flux at power level of 59 percent but these variations stopped when the power level was reduced, are satisfied.

2.0 EVALUATION

2.1 Accidents (Other than Loss of Coolant Accident (LOCA)) and Transients Affected by One Recirculation Loop out of Service

2.1.1 One Pump Seizure Accidents

The licensee states that the one-pump seizure accident is a relatively mild event during two recirculation pump operations. Analyses were performed to determine the impact this accident would have on one recirculation pump operation. These analyses were performed using NRC staff approved models. The analyses were conservatively conducted from a steady-state operating condition of 78 percent of rated thermal power and 63 percent core flow. Pump seizure was simulated by setting the single operating pump speed to zero instantaneously.

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Results of the analyses indicate that neither pressure nor cladding thermal limits are exceeded during the event. Peak vessel pressure is calculated to be 1031 psig (ASME code limit is 1375 psig) and minimum critical power ratio (MCPR) is 1.17 (safety limit is 1.06).

2.1.2 Abnormal Operational Transients

The licensee discussed the effects of single loop operation on the course of abnormal operational transients. Pressurization and cold water increase events, as well as rod withdrawal error, were addressed. Flow decrease is covered by the pump seizure accident already described. The results of calculations for the limiting event for each category were also presented. Initial operating conditions were conservatively assumed to be 78 percent of rated thermal power and 63 percent core flow.

2.1.2.1 a) Pressurization Events

The limiting pressurization event is the generator load rejection without bypass transient. For single loop operation, the licensee has calculated that the maximum vessel pressure is 1128 psig and the MCPR is 1.29. Each of the values satisfies its respective safety limit.

b) Cold Water Increase

The limiting cold water increase event is the feedwater controller failure to maximum demand transient. The reactor is assumed to be in single loop operation at conservative initial operating conditions of 78 percent of rated power and 63 percent core flow when failure of the feedwater control system instantaneously increases the feedwater flow to the runout capacity of 160 percent of rated flow. The peak pressure is calculated to be 1126 psig and the MCPR is 1.26, each satisfying its respective safety limit.

c) Rod Withdrawal Error

The rod withdrawal error at rated power is given in the Final Safety Analysis Report for the initial core and in cycle dependent reload supplemental submittals. These analyses are performed to demonstrate that, even if the operator ignores all instrument indications and the alarms which could occur during the course of the transient, the rod block system will stop rod withdrawal at a minimum critical power ratio which is higher than the fuel cladding integrity safety limit. Correction of the rod block equation and lower initial power for single-loop operation in the Technical Specifications (see Section 5 of this safety evaluation) assures that the MCPR safety limit is not violated.

One-pump operation results in backflow through 10 of the 20 jet pumps while flow is being supplied to the lower plenum from the active jet pumps. Because of this backflow through the inactive jet pumps, present rod-block equation and APRM settings must be modified. The licensee has modified the two-pump rod block equation and average power range monitor (APRM) settings that exist in the Technical Specifications for one-pump operation and the staff has found them acceptable.

The staff finds that one loop transients and accidents other than LOCA, which is discussed below, are bounded by the two loop operation analyses and are therefore acceptable.

2.1.3 Minimum Critical Power Ratio (MCPR) Uncertainties

For single-loop operation, the rated condition steady-state MCPR limit is increased by 0.01 to account for increased uncertainties in the core total flow and traversing in-core probe (TIP) readings. The MCPR will vary depending on flow conditions. This leads to the possibility of a large inadvertent flow increase which would cause the MCPR to decrease below the safety limit for a low initial MCPR at reduced flow conditions. Therefore, the required MCPR must be increased at reduced core flow by a flow factor K_f . The K_f factors for two loop operation are derived assuming both recirculation loop controllers fail. This condition of both recirculation loop controllers failing maximizes the power increase and hence bounds the maximum delta MCPR for single loop operation transients. When operating on one loop, the flow and power increase will be less than that associated with two loops at full flow. The K_f factors derived from the two-loop assumptions are therefore conservative for single loop operation.

2.2 Loss of Coolant Accident (LOCA)

The licensee has performed analyses of a spectrum of recirculation suction line breaks under single loop operation conditions. The licensee states that evaluation of these calculations which are performed according to the procedure outlined in NEDO-20556-2, Rev. 1, "General Electric Company Analytical Model for Loss-of-Coolant Analysis in Accordance with 10 CFR 50 Appendix K - Amendment No. 2 One Recirculation Loop out of Service," indicates that a multiplier of 0.87 should be applied to the maximum average planar linear heat generation rate (MAPLHGR) limits for single loop operation of La Salle, Unit 1. Other plants using 8 x 8R fuel have been required to use a reduction factor of 0.85. We require that La Salle, Unit 1 likewise reduce its MAPLHGR by 0.85.

3.0 THERMAL HYDRAULICS

The licensee has confirmed that analysis uncertainties are independent of whether flow is provided by two loops or a single loop. The only exceptions to this are core total flow and TIP reading. The effect of these uncertainties is an increase in the MCPR by .01, which is more than offset by the K_f factor required at low flows. The steady state operating MCPR with single-loop operation will be conservatively established by multiplying the rated flow MCPR limit by the K_f factor.

4.0 STABILITY ANALYSIS

As indicated in the applicant's submittal, operating along the minimum forced recirculation line with one pump running at minimum speed is more stable than operating with both pumps operating at minimum speed.

The licensee will be required to operate in master manual to reduce the effects of instabilities due to controller feedback. The staff has accepted previous stability analyses results as evidence that the core can be operated safely while our generic evaluation of boiling water reactor stability characteristics and analysis methods continues. The previous stability analysis results include natural circulation conditions and thus bound the single loop operation. In addition, the decay ratio (0.50) predicted for initial cycle for Unit 1 shows margin relative to Browns Ferry, Unit 1 (.83) which had the flow noise oscillations during single recirculation loop operation. We conclude that with appropriate limitations to recognize and avoid operating instabilities, that the reactor can be operated safely in the single loop mode. Our evaluation of the flow/power oscillations evidenced in Browns Ferry will continue and any pertinent conclusions resulting from this study will be applied to La Salle, Unit 1.

5.0 SUMMARY ON SINGLE LOOP OPERATION

5.1 Steady State Thermal Power Level will not exceed 50 percent of Rated Power

Operating at 50 percent of rated power with appropriate Technical Specification (TS) changes has been approved on a cycle basis for several operating plants. It is concluded for La Salle, Unit 1 that for operation at 50 percent of rated power, consistent with the provisions of item h below, that transient and accident bounds will not be exceeded.

5.2 Minimum Critical Power Ratio (MCPR) Safety Limit Will Be Increased by 0.01 to 1.07

The MCPR Safety Limit will be increased by 0.01 to account for increased (TIP) readings. The licensee has determined that the change conservatively bounds the uncertainties introduced by single loop operation.

5.3 Minimum Critical Power Ratio (MCPR) Limiting Condition for Operation (LCO) will be increased by 0.01

The staff requires that the operating limit MCPR be increased by 0.01 and multiplied by the appropriate two loop K_f factors that are in the La Salle, Unit 1 TS. This will preclude an inadvertent flow increase from causing the MCPR to drop below the safety limit MCPR.

5.4 The Maximum Average Planar Linear Heat Generation Rate (MAPLHGR) Limits will be Reduced by Appropriate Multipliers

The licensee proposed reducing the TS MAPLHGR by 0.87 for Single Loop Operation. These reductions were based on an analysis method proposed by General Electric in NEDE-20566-2. We require a reduction factor of 0.85 consistent with previous single recirculation loop operation approvals for plants with 8 x 8R fuel. This change has been discussed with and agreed to by licensee.

5.5 The APRM Scram and Rod Block Setpoints will be Reduced

The licensee proposed to modify the two loop APRM Scram, Rod Block and Rod Block Monitor (RBM) setpoints to account for back flow through half the jet pumps. These setpoint equations will be changed in the La Salle, Unit 1 TS. The above changes are similar to other plant TS changes and are acceptable to the staff.

5.6 The Recirculation Control will be in Manual Control

The staff requires that the licensee operate the recirculation system in the manual mode to eliminate the need for control system analyses and to reduce the effects of potential flow instabilities.

5.7 Surveillance Requirements

The staff requires that the licensee perform daily surveillance on the jet pumps to ensure that the pressure drop for one jet pump in a loop does not vary from the mean of all jet pumps in that loop by more than 5 percent.

5.8 Provisions to Allow Operation with One Recirculation Loop Out of Service

- a. The steady-state thermal power level will not exceed 50 percent of rated power.
- b. The Minimum Critical Power Ratio (MCPR) Safety Limit will be increased by .01 to 1.07.

- c. The MCPR Limiting Condition for Operation (LCO) will be increased by 0.01.
- d. The Maximum Average Planar Linear Heat Generation Rate (MAPLHGR) Limit will be reduced by 0.85.
- e. Technical Specification Setpoints shall read as follows:
 - T. S. 2.2.1 $S \leq 0.66W + 45.7$ (Trip Setpoint)
 $S \leq 0.66W + 48.7$ (Allowable)
 - T. S. 3.2.2 $S \leq (0.66W + 45.7) T^*$
 $S_{RB} \leq (0.66W + 36.7) T^*$
 T^* as defined in T. S. 3.2.2
 - T. S. 3.3.6 APRM Upscale $\leq 0.66W + 36.7$ (Trip Setpoint)
 $\leq 0.66W + 39.7$ (Allowable)
 RBM Upscale $\leq 0.66W + 34.7$ (Trip Setpoint)
 $\leq 0.66W + 37.7$ (Allowable)
- f. APRM flux noise will be measured once per shift; and the recirculation loop flow will be reduced if the flux noise average over 1/2 hour exceeds 5 percent peak to peak, as measured by the APRM chart recorder.
- g. The core plate delta P noise be measured once per shift, and the recirculation loop flow will be reduced if the noise exceeds 1 psi peak-to-peak.

6.0 AUTHORIZATION FOR SINGLE LOOP OPERATION FOR FUEL CYCLE 1

Based upon the above evaluation and a history of successful operation of other boiling water reactors, we conclude that single loop operation of La Salle, Unit 1 up to a power level of 50 percent and in accordance with the proposed Technical Specification changes, will not exceed the accident and transient bounds previously found acceptable by the NRC staff and is therefore acceptable. The approval for single loop operation up to power level of 50 percent is authorized during cycle 1 until the staff concerns stemming from Browns Ferry, Unit 1 single loop operation are satisfied.

7.0 ENVIRONMENTAL CONSIDERATION

We have determined that this Amendment does not authorize a change in effluent types of total amount nor an increase in power level and will not result in any significant environmental impact. Having made this determination, we have further concluded that this Amendment involves action which is insignificant from the standpoint of environmental impact, and, pursuant to 10 CFR Section 51.5(d)(4), that an environmental impact statement or negative declaration and environmental impact appraisal need not be prepared in connection with the issuance of this statement.

8.0 CONCLUSION

We have concluded, based on the considerations discussed above, that; (1) because the Amendment does not involve a significant increase in the probability or consequences or accidents previously considered, does not create the possibility of an accident of a type different from any evaluated previously, and does not involve a significant decrease in a safety margin, the Amendment does not involve a significant hazards consideration; (2) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner; and (3) 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.

Date: DEC 16 1982

UNITED STATES NUCLEAR REGULATORY COMMISSION

DOCKET NO. 50-373

COMMONWEALTH EDISON COMPANY

NOTICE OF ISSUANCE OF AMENDMENT OF FACILITY OPERATING LICENSE

The U. S. Nuclear Regulatory Commission (the Commission) has issued Amendment No. 11 to Facility Operating License No. NPF-11, issued to Commonwealth Edison Company, which adds License Condition 2.C.(34) for operation of the La Salle County Station, Unit No. 1 (the facility) located in Brookfield Township, La Salle County, Illinois.

The Amendment authorizes the operation of La Salle County Station, Unit 1 with one recirculation loop out of service for the first fuel cycle only. Also, the Amendment adds a license condition limiting a power level to 50 percent of full power or less during the operation with one recirculation loop out of service.

The application for 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. Prior public notice of this Amendment was not required since the Amendment does not involve a significant hazards consideration.

The Commission has determined that the issuance of this Amendment will not result in any significant environmental impact and that pursuant to 10 CFR Section 51.5(d)(4) an environmental impact statement, or negative declaration and environmental impact appraisal need not be prepared in connection with issuance of this Amendment.

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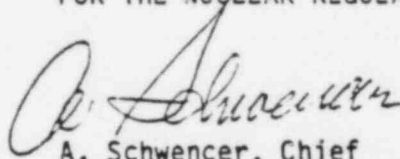
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For further details with respect to this action, see (1) the application for amendment dated December 6, 1982; (2) Amendment No. 11 to License No. NPF-11 dated December 16, 1982; and (3) the Commission's related safety evaluation. All of these items are available for public inspection at the Commission's Public Document Room located at 1717 H Street, NW, Washington, DC 20555, and the Public Library of Illinois Valley Community College, Rural Route No. 1, Ogelsby, Illinois 61348. A copy of items (1), (2) and (3) may be obtained upon request addressed to the U. S. Nuclear Regulatory Commission, Washington, DC 20555, Attention: Director, Division of Licensing.

Dated at Bethesda, Maryland, this 16th day of December 1982.

FOR THE NUCLEAR REGULATORY COMMISSION



A. Schwencer, Chief
Licensing Branch No. 2
Division of Licensing

SUBJECT: MCPR Operating Limit without EOC-RPT Unit 2 Technical Specification

REFERENCES: (A) Letter from General Electric - MCPR Operating limit without EOC-RPT dated December 14, 1981.

(B) NUREG - 0123 Standard Technical Specifications for General Electric (BWR/5).

BACKGROUND

Reference (b) provides for a minimum Critical Power Ratio (MCPR) Technical Specification Limiting Condition for Operation that allows a revised MCPR operating limit if EOC-RPT is inoperable.

DISCUSSION

Reference (A) provides the required data to allow the Technical Specifications to be revised to allow operation with EOC-RPT inoperable if the MCPR operating limit is changed. Attached pages 3/4 2-4, 3/4 2-5, and 3/4 3-39 include the revised Unit 2 Technical Specification changes which are necessary to accomplish this. These changes are similar to corresponding pages in reference (b).

We therefore request that these changes be incorporated in the LaSalle County Station Unit 2 Technical Specifications prior to the issuance of the operating license.

GEORGE R. CRANE
GENERAL ELECTRIC

1 OF 2
Tech Specs
NUCLEAR POWER
SYSTEMS DIVISION

GENERAL ELECTRIC COMPANY, 175 CURTNER AVE., SAN JOSE, CALIFORNIA 95125

MC 391, (408) 925-3798
LS-2179

December 14, 1981

Mr. G. R. Crane
Commonwealth Edison Company
P.O. Box 767
Chicago, IL 60690

Dear Mr. Crane:

SUBJECT: LASALLE COUNTY STATION UNITS 1 & 2
MCPR OPERATING LIMIT WITHOUT EOC-RPT

Per your request, the MCPR operating limit without EOC-RPT has been calculated for LaSalle Unit 1. The results of this evaluation are summarized below and on the attached graph. Please note that the load rejection without bypass transient sets the limit at Option A and the feedwater controller failure sets the limit at Option B. The limit at scram times between the two options must be determined from the graph.

Transient Event	MCPR-Operating Limit	
	Option A	Option B
Load Rejection without Bypass without EOC-RPT	1.37	1.25
Feedwater Controller Failure without EOC-RPT	1.33	1.26

If you should any questions regarding the above or the attached, please feel free to call us.

Very truly yours,

H. R. Pfeffer

H. R. Pfeffer, Project Manager
LaSalle County Station Units 1 & 2

bcc: M. E. Urata, w/att
J. R. Palette, w/att
W. L. Ho, w/att

HRP:ggt/794

Attachment

cc: K. J. Brown, w/att
D. C. Haan, w/o att
B. R. Shelton, w/o att
DBL/PT/CTK

T. E. Watts, w/o att
P. B. Kavanagh, w/o att
R. E. Spencer, w/o att

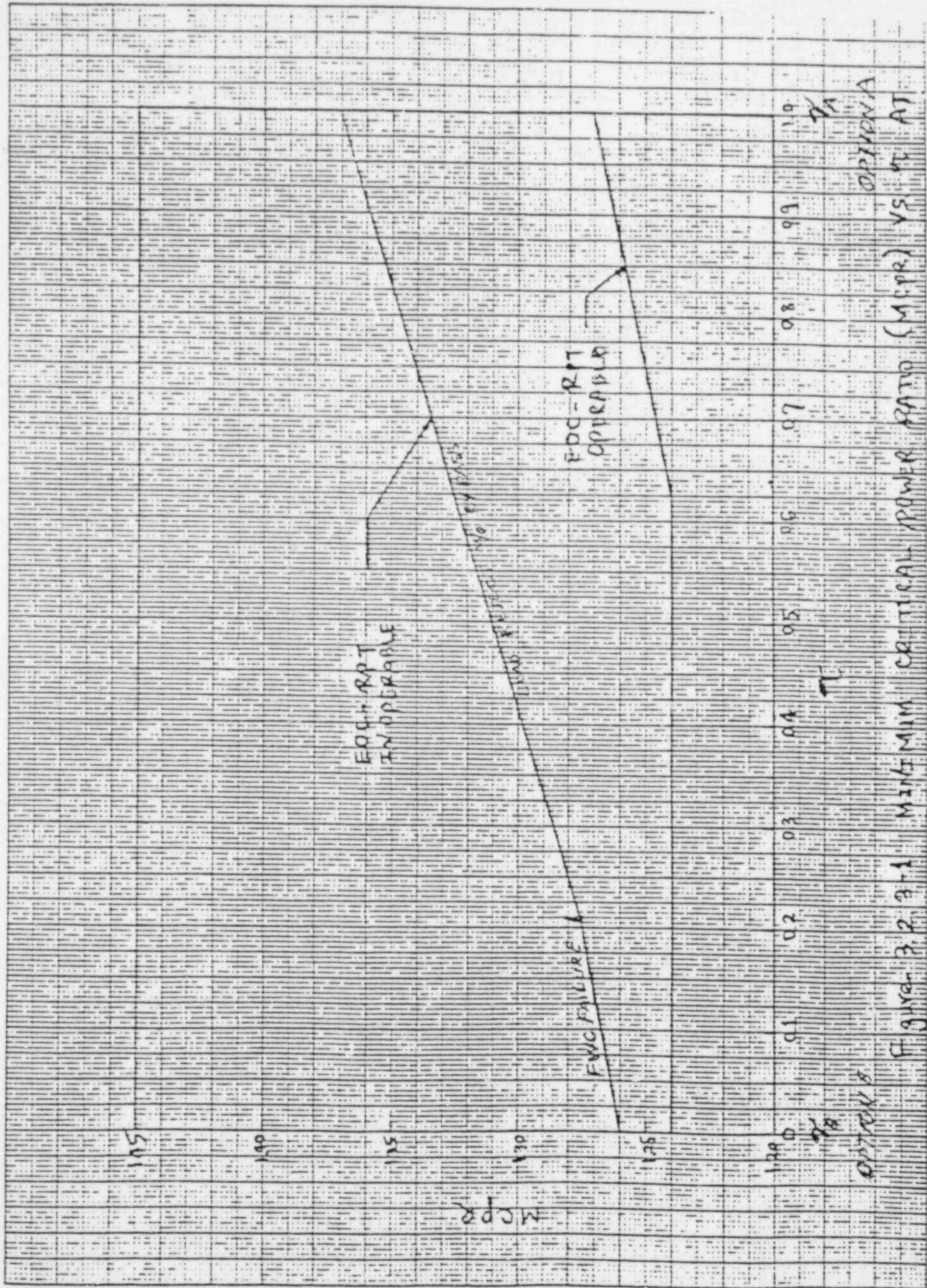


Figure 3.2.3-1 Minimum Critical Power Ratio (MCPR) vs. AT

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POWER DISTRIBUTION LIMITS

POWER DISTRIBUTION LIMITS

3/4.2.3 MINIMUM CRITICAL POWER RATIO

LIMITING CONDITION FOR OPERATION

3.2.3 The MINIMUM CRITICAL POWER RATIO (MCPR) shall be equal to or greater than the MCPR limit determined from Figure 3.2.3-1 times the K_f determined from Figure 3.2.3-2, *provided that the LFC-EPT system is operable per Specification 3.3.4.2.*
APPLICABILITY:

OPERATIONAL CONDITION 1, when THERMAL POWER is greater than or equal to 25% of RATED THERMAL POWER.

ACTION

insert attached
With MCPR less than the applicable MCPR limit determined from Figures 3.2.3-1 and 3.2.3-2, initiate corrective action within 15 minutes and restore MCPR to within the required limit within 2 hours or reduce THERMAL POWER to less than 25% of RATED THERMAL POWER within the next 4 hours.

SURVEILLANCE REQUIREMENTS

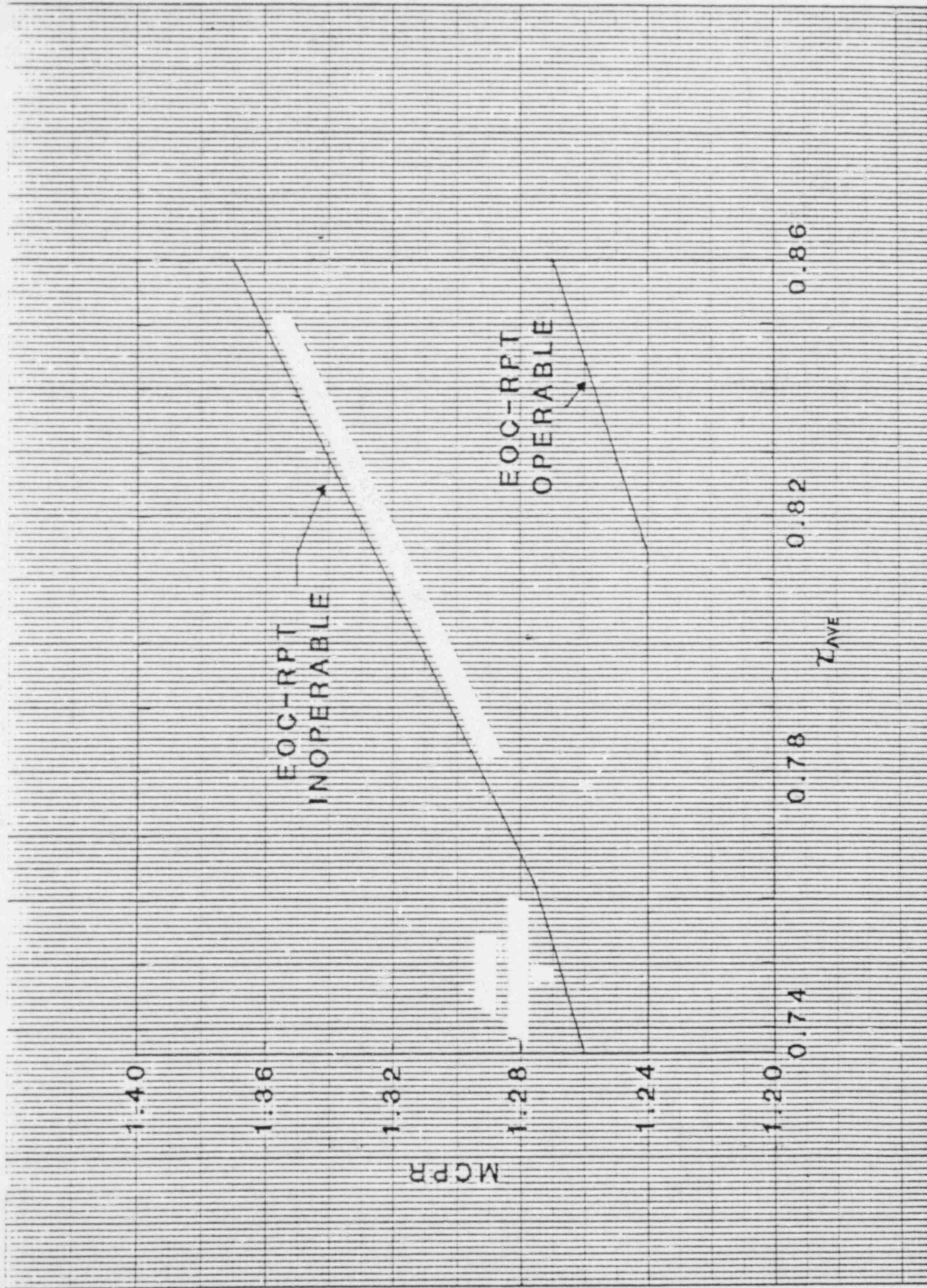
4.2.3 MCPR, with:

- a. $\tau_{ave} = 0.86$ prior to performance of the initial scram time measurements for the cycle in accordance with Specification 4.1.3.2, or
- b. τ_{ave} determined within 72 hours of the conclusion of each scram time surveillance test required by Specification 4.1.3.2,

shall be determined to be equal to or greater than the applicable MCPR limit determined from Figures 3.2.3-1 and 3.2.3-2:

- a. At least once per 24 hours,
- b. Within 12 hours after completion of a THERMAL POWER increase of at least 15% of RATED THERMAL POWER, and
- c. Initially and at least once per 12 hours when the reactor is operating with a LIMITING CONTROL ROD PATTERN for MCPR.

- A. With the end-of-cycle recirculation pump trip system inoperable per Specification 3.3.4.2, operation may continue and the provisions of Specification 3.0.4 are not applicable provided that, within one hour, MCPR is determined to be equal to or greater than the MCPR limit shown in Figure 3.2.3-1 EOC-RPT inoperable curve, times the K_f shown in Figure 3.2.3-2.
- B. With MCPR less than the applicable MCPR limit shown in Figures 3.2.3-1 and 3.2.3-2, initiate corrective action within 15 minutes and restore MCPR to within the required limit within 2 hours or reduce THERMAL POWER to less than 25% of RATED THERMAL POWER within the next 4 hours.



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INSTRUMENTATION

END-OF-CYCLE RECIRCULATION PUMP TRIP SYSTEM INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.4.2 The end-of-cycle recirculation pump trip (EDC-RPT) system instrumentation channels shown in Table 3.3.4.2-1 shall be OPERABLE with their trip setpoints set consistent with the values shown in the Trip Setpoint column of Table 3.3.4.2-2 and with the RECIRCULATION PUMP TRIP SYSTEM RESPONSE TIME as shown in Table 3.3.4.2-3.

APPLICABILITY: OPERATIONAL CONDITION 1, when THERMAL POWER is greater than or equal to 30% of RATED THERMAL POWER.

ACTION:

- 2007
10-10-07
10-10-07
- a. With an end-of-cycle recirculation pump trip system instrumentation channel trip setpoint less conservative than the value shown in the Allowable Values column of Table 3.3.4.2-2, declare the channel inoperable until the channel is restored to OPERABLE status with the channel setpoint adjusted consistent with the Trip Setpoint value.
 - b. With the number of OPERABLE channels one less than required by the Minimum OPERABLE Channels per Trip System requirement for one or both trip systems, place the inoperable channel(s) in the tripped condition within one hour.
 - c. With the number of OPERABLE channels two or more less than required by the Minimum OPERABLE Channels per Trip System requirement(s) for one trip system and:
 1. If the inoperable channels consist of one turbine control valve channel and one turbine stop valve channel, place both inoperable channels in the tripped condition within one hour.
 2. If the inoperable channels include two turbine control valve channels or two turbine stop valve channels, declare the trip system inoperable.
 - d. With one trip system inoperable, restore the inoperable trip system to OPERABLE status within 72 hours or reduce THERMAL POWER to less than 30% of RATED THERMAL POWER within the next 6 hours.
 - e. With both trip systems inoperable, restore at least one trip system to OPERABLE status within one hour or reduce THERMAL POWER to less than 30% of RATED THERMAL POWER within the next 6 hours.

INSTRUMENTATION

END-OF-CYCLE RECIRCULATION PUMP TRIP SYSTEM INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.4.2 The end-of-cycle recirculation pump trip (EOC-RPT) system instrumentation channels shown in Table 3.3.4.2-1 shall be OPERABLE with their trip setpoints set consistent with the values shown in the Trip Setpoint column of Table 3.3.4.2-2 and with the END-OF-CYCLE RECIRCULATION PUMP TRIP SYSTEM RESPONSE TIME as shown in Table 3.3.4.2-3.

APPLICABILITY: OPERATIONAL CONDITION 1, when THERMAL POWER is greater than or equal to (30)% of RATED THERMAL POWER.

ACTION:

- a. With an end-of-cycle recirculation pump trip system instrumentation channel trip setpoint less conservative than the value shown in the Allowable Values column of Table 3.3.4.2-2, declare the channel inoperable until the channel is restored to OPERABLE status with the channel setpoint adjusted consistent with the Trip Setpoint value.
- b. With the number of OPERABLE channels one less than required by the Minimum OPERABLE Channels per Trip System requirement for one or both trip systems, place the inoperable channel(s) in the tripped condition within one hour.
- c. With the number of OPERABLE channels two or more less than required by the Minimum OPERABLE Channels per Trip System requirement for one trip system and:
 1. If the inoperable channels consist of one turbine control valve channel and one turbine stop valve channel, place both inoperable channels in the tripped condition within one hour.
 2. If the inoperable channels include two turbine control valve channels or two turbine stop valve channels, declare the trip system inoperable.
- d. With one trip system inoperable, restore the inoperable trip system to OPERABLE status within 72 hours or ~~take the ACTION required by Specification 3.2.3~~3~~ (reduce THERMAL POWER to less than (30)% of RATED THERMAL POWER within the next 6 hours).~~
- e. With both trip systems inoperable, restore at least one trip system to OPERABLE status within one hour or ~~take the ACTION required by Specification 3.2.3~~3~~ (reduce THERMAL POWER to less than (30)% of RATED THERMAL POWER within the next 6 hours).~~