

ATTACHMENT B

PROPOSED CHANGE TO APPENDIX A

TECHNICAL SPECIFICATION TO OPERATING LICENSE

NPF-11

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### 3/4.4 REACTOR COOLANT SYSTEM

#### 3/4.4.1 RECIRCULATION SYSTEM

##### RECIRCULATION LOOPS

##### LIMITING CONDITION FOR OPERATION

3.4.1.1 Two reactor coolant system recirculation loops shall be in operation.

APPLICABILITY: OPERATIONAL CONDITIONS 1\* and 2\*.

ACTION:

- a. With one reactor coolant system recirculation loop not in operation:
  1. Within 4 hours:
    - a) Place the recirculation flow control system in the Master Manual mode, and
    - ~~b) Reduce THERMAL POWER to  $\leq 50\%$  of RATED THERMAL POWER, and,~~
    - b) ~~ST~~ Increase the MINIMUM CRITICAL POWER RATIO (MCPR) Safety Limit by 0.01 to ~~1.07~~ per Specification 2.1.2, and,
    - c) ~~ST~~ Increase the MINIMUM CRITICAL POWER RATIO (MCPR) Limiting Condition for Operation by 0.01 per Specification 3.2.3, and,
    - d) ~~ST~~ Reduce the MAXIMUM AVERAGE PLANAR LINEAR HEAT GENERATION RATE (MAPLHGR) limit to a value of 0.85 times the two recirculation loop operation limit per Specification 3.2.1, and,
    - e) ~~ST~~ Reduce the Average Power Range Monitor (APRM) Scram and Rod Block and Rod Block Monitor Trip Setpoints and Allowable Values to those applicable to single loop recirculation loop operation per Specifications 2.2.1, 3.2.2, and 3.3.6.

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~~2. At least once per 12 hours:~~

- ~~a) Verify that the APRM flux noise averaged over 30 minutes does not exceed 5% peak to peak; otherwise, reduce the recirculation loop flow until the APRM flux noise is less than the 5% peak to peak limit, and,~~
- ~~b) Verify that the core plate  $\Delta P$  noise does not exceed 1 psi peak to peak; otherwise, reduce the recirculation loop flow until the  $\Delta P$  noise is less than the 1 psi limit.~~

\*See Special Test Exception 3.10.4.

Following page 3/4 4-1:

2. When operating within the surveillance region specified in Figure 3.4.1.1-1:
  - a. With core flow less than 39% of rated core flow, initiate action within 15 minutes to either:
    1. Leave the surveillance region within 4 hours, or
    2. Increase core flow to greater than or equal to 39% of rated flow within 4 hours.
  - b. With the APRM and LPRM<sup>#</sup> neutron flux noise level greater than three (3) times their established baseline noise levels:
    1. Initiate corrective action within 15 minutes to restore the noise levels to within the required limit within 2 hours, otherwise
    2. Leave the surveillance region specified in Figure 3.4.1.1-1 within the next 2 hours.

# - Detector levels A and C of one LPRM string per core octant plus detector levels A and C of one LPRM string in the center region of the core should be monitored.

REACTOR COOLANT SYSTEM

LIMITING CONDITION FOR OPERATION (Continued)

ACTION: (Continued)

- was 2    ➤    3. The provisions of Specification 3.0.4 are not applicable.
- was 3    ➤    4. Otherwise, be in at least HOT SHUTDOWN within the next 12 hours.
- b. With no reactor coolant system recirculation loops in operation, immediately initiate measures to place the unit in at least HOT SHUTDOWN within the next 6 hours.

SURVEILLANCE REQUIREMENTS

4.4.1.1 Each reactor coolant system recirculation loop flow control valve shall be demonstrated OPERABLE at least once per 18 months by:

- a. Verifying that the control valve fails "as is" on loss of hydraulic pressure at the hydraulic power units, and
- b. Verifying that the average rate of control valve movement is:
1. Less than or equal to 11% of stroke per second opening, and
  2. Less than or equal to 11% of stroke per second closing.

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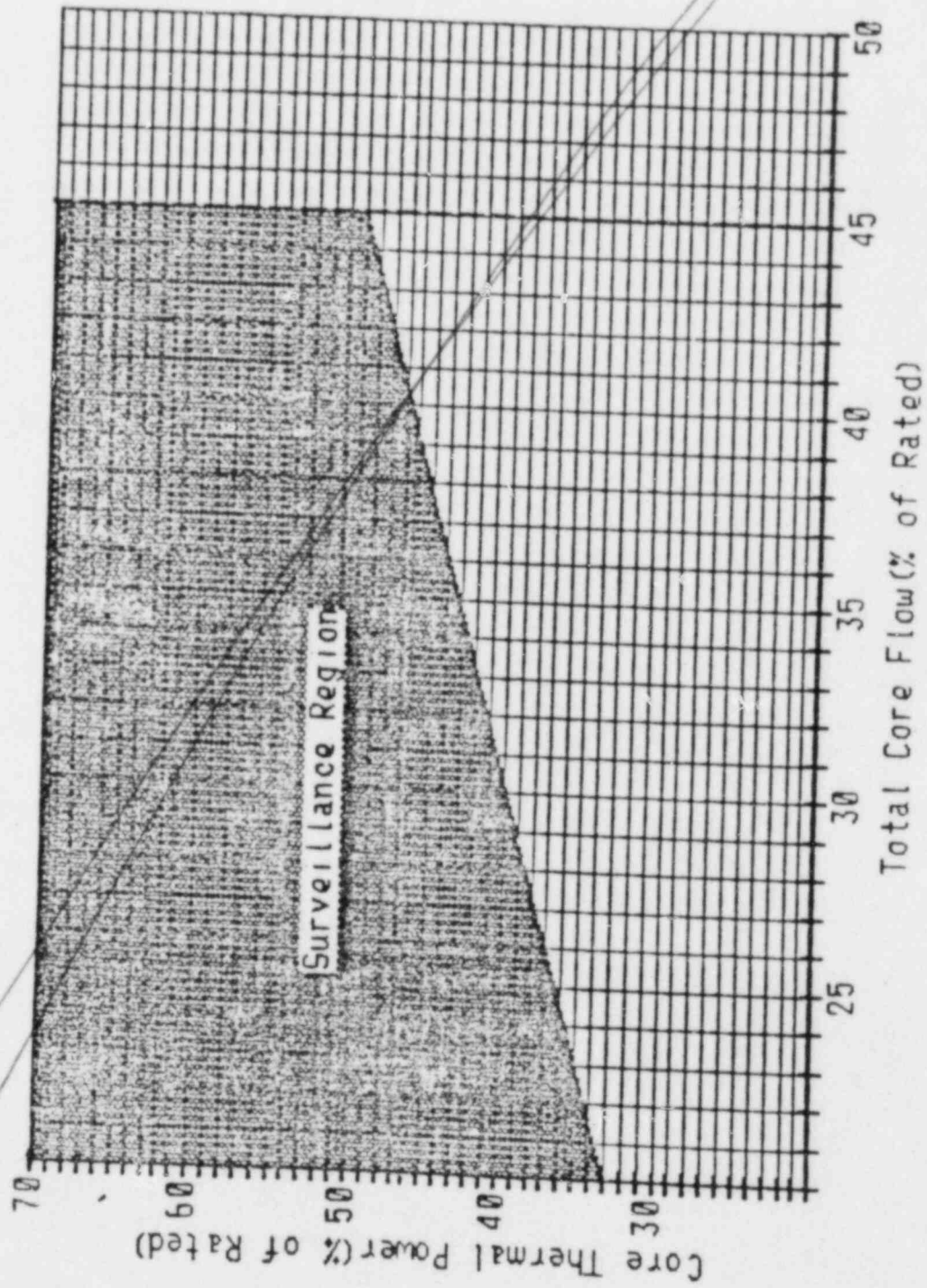
Following page 3/4 4-1a:

4.4.1.2 With one reactor coolant system recirculation loop not in operation:

- a. Establish baseline APRM and LPRM<sup>#</sup> neutron flux noise level values within 4 hours upon entering the surveillance region of Figure 3.4.1.1-1 provided that baseline values have not been established since last refueling.
- b. When operating in the surveillance region of Figure 3.4.1.1-1, verify that the APRM and LPRM<sup>#</sup> neutron flux noise levels are less than or equal to three (3) times the baseline values:
  1. At least once per 12 hours, and
  2. Within 1 hour after completion of a THERMAL POWER increase of at least 5% of RATED THERMAL POWER, initiating the surveillance within 15 minutes of completion of the increase.
- c. When operating in the surveillance region of Figure 3.4.1.1-1, verify that core flow is greater than or equal to 39% of rated core flow at least once per 12 hours.

<sup>#</sup> - Detector levels A and C of one LPRM string per core octant plus detector levels A and C of one LPRM string in the center region of the core should be monitored.





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3/4

Figure 3.4.1.5-1

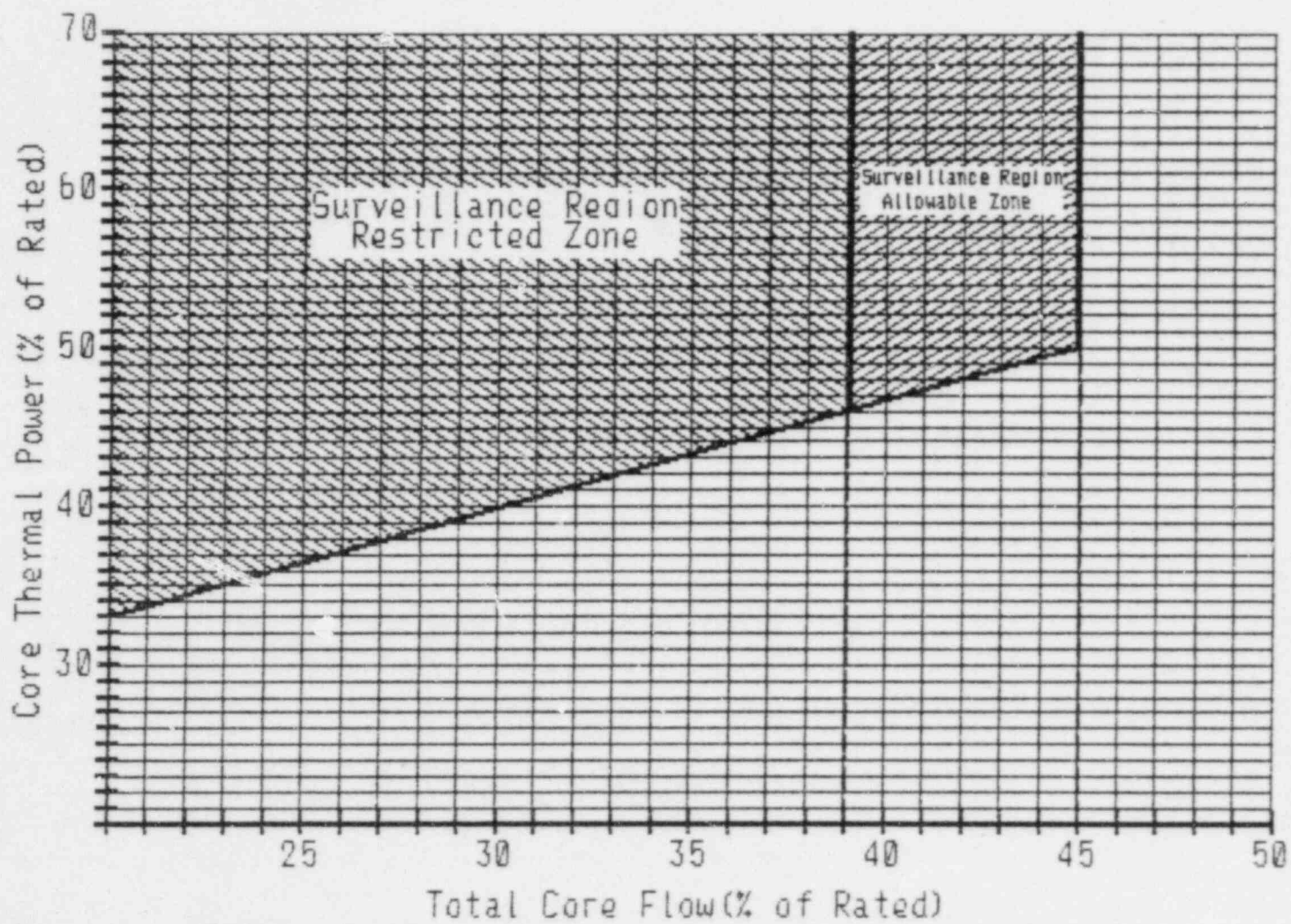


Figure 3.4.1.1-1



The possibility of thermal hydraulic instability in a BWR has been investigated since the startup of early BWRs. Based on tests and analytical models, it has been identified that the high power-low flow corner of the power-to-flow map is the region of least stability margin. This region maybe encountered during startups, shutdowns, sequence exchanges, and as a result of a recirculation pump(s) trip event.

To ensure stability, single loop operation is limited in a designated restricted region (Figure 3.4.1.1-1) of the power-to-flow map. Single loop operation with a designated surveillance region (Figure 3.4.1.1-1) of the power-to-flow map requires monitoring of APRM and LPRM noise levels.

Insert Following Page B 3/4 4-1

## SIGNIFICANT HAZARDS CONSIDERATION

Commonwealth Edison has evaluated the proposed Technical Specification Amendment and determined that it does not represent a significant hazards consideration. Based on the criteria for defining a significant hazards consideration established in 10 CFR 50.92, operation of LaSalle County Station Units 1 and 2 in accordance with the proposed amendment will not:

- 1) Involve a significant increase in the probability or consequences of an accident previously evaluated because:

For Cycle 2, the MCPR fuel cladding integrity safety limit was changed from 1.06 to 1.07 for two recirculation loop operation, and from 1.07 to 1.08 for single recirculation loop operation. The safety limit is smaller for initial cores because the uncertainties in TIP readings and the R Factor are smaller.

The addition of a new MAPLHGR vs Exposure curve for the reload fuel type BP8CRB299L in the APLHGR Technical Specification. The MAPLHGR limits were provided by General Electric in the Supplemental Reload Licensing Submittal LIC2.

The replacement of the existing MCPR curve with a revised curve which reflects the limiting transients for cycle 2. The MCPR limits were provided by General Electric in the Supplemental Reload Licensing Submitting LIC2. Although the cycle specific demonstrated adequate stability, single loop thermal hydraulic stability requirements were added to the Recirculation System Technical Specification to address the NRC concerns in this area.

- 2) Create the possibility of a new or different kind of accident from any accident previously evaluated because:

The proposed Technical Specification changes do not represent significant changes in acceptance criteria or safety margins and all changes have been made based on methods that have been previously accepted by the NRC. The reload core involves a new fuel type which must be licensed. The new fuel type has been analyzed with approved methods and meets the approved limits of GESTAR. The new fuel type presents no unreviewed safety questions because the bundle design has been approved by the NRC, and licensing of new bundle enrichments has been treated as a non-safety related change to GESTAR.

- 3) Involve a significant reduction in the margin of safety because:

The deletion of the EOC-RPT inoperable provision in the MCPR and EOC Recirculation Pump Trip System Technical Specifications. The EOC-RPT inoperable analysis was not justified in the second cycle but may be included in future cycles.

The replacement of the existing  $K_f$  curve with a revised curve which is based on LaSalle's rated core power and core flow. The original curve was a generic curve.

Based on the preceding discussion, it is concluded that the proposed system change clearly falls within all acceptable criteria with respect to the system or component, the consequences of previously evaluated accidents will not be increased and the margin of safety will not be decreased. Therefore, based on the guidance provided in the Federal Register and the criteria established in 10 CFR 50.92, the proposed change does not constitute a significant hazards consideration.