

ATTACHMENT 2
LIMERICK GENERATING STATION
UNITS 1 AND 2

DOCKET NOS. 50-352
50-353

LICENSE NOS. NPF-39
NPF-85

TECHNICAL SPECIFICATIONS CHANGE REQUEST

NO. 94-16-0

LIST OF AFFECTED PAGES

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TABLE 3.3.6-2 (continued)
CONTROL ROD BLOCK INSTRUMENTATION SETPOINTS

| <u>TRIP FUNCTION</u> | <u>TRIP SETPOINT</u> | <u>ALLOWABLE VALUE</u> |
|---|----------------------|------------------------|
| 6. <u>REACTOR COOLANT SYSTEM RECIRCULATION FLOW</u> | | |
| a. Upscale | * | * |
| b. Inoperative | N.A. | N.A. |
| c. Comparator | ≤ 10% flow deviation | ≤ 11% flow deviation |
| 7. <u>REACTOR MODE SWITCH SHUTDOWN POSITION</u> | N.A. | N.A. |

* Refer to the COLR for these setpoints.

** May be reduced provided the Source Range Monitor has an observed count rate and signal-to-noise ratio on or above the curve shown in Figure 3.3.6-1.

*** Equivalent to 13 gallons/scram discharge volume.

- (a) There are three upscale trip levels. Each is applicable only over its specified operating core thermal power range. All RBM trips are automatically bypassed below the low power setpoint (LPSP). The upscale LTSP is applied between the low power setpoint (LPSP) and the intermediate power setpoint (IPSP). The upscale ITSP is applied between the intermediate power setpoint and the high power setpoint (HPSP). The HTSP is applied above the high power setpoint.
- (b) Power range setpoints control enforcement of appropriate upscale trips over the proper core thermal power ranges. The power signal to the RBM is provided by the APRM.

REACTOR COOLANT SYSTEM

SURVEILLANCE REQUIREMENTS

4.4.1.1.1 Each pump discharge valve shall be demonstrated OPERABLE by cycling each valve through at least one complete cycle of full travel during each startup* prior to THERMAL POWER exceeding 25% of RATED THERMAL POWER.

4.4.1.1.2 Each pump MG set scoop tube mechanical and electrical stop shall be demonstrated OPERABLE with overspeed setpoints less than or equal to the setpoints as noted in the CORE OPERATING LIMITS REPORT, as a percentage of rated core flow, at least once per 24 months.

4.4.1.1.3 Establish a baseline APRM and LPRM** neutron flux noise value within the regions for which monitoring is required (Specification 3.4.1.1, ACTION c) within 2 hours of entering the region for which monitoring is required unless baselining has previously been performed in the region since the last refueling outage.

4.4.1.1.4 With one reactor coolant system recirculation loop not in operation, at least once per 12 hours verify that:

- a. Reactor THERMAL POWER is $\leq 70\%$ of RATED THERMAL POWER,
- b. The recirculation flow control system is in the Local Manual mode, and
- c. The speed of the operating recirculation pump is $\leq 90\%$ of rated pump speed.
- d. Core flow is greater than 39% when THERMAL POWER is within the restricted zone of Figure 3.4.1.1-1.

4.4.1.1.5 With one reactor coolant system recirculation loop not in operation, within 15 minutes prior to either THERMAL POWER increase or recirculation loop flow increase, verify that the following differential temperature requirements are met if THERMAL POWER is $\leq 30\%$ of RATED THERMAL POWER or the recirculation loop flow in the operating recirculation loop is $\leq 50\%$ of rated loop flow:

- a. $\leq 145^{\circ}\text{F}$ between reactor vessel steam space coolant and bottom head drain line coolant,
- b. $\leq 50^{\circ}\text{F}$ between the reactor coolant within the loop not in operation and the coolant in the reactor pressure vessel, and
- c. $\leq 50^{\circ}\text{F}$ between the reactor coolant within the loop not in operation and the operating loop.

The differential temperature requirements of Specification 4.4.1.1.5b. and c. do not apply when the loop not in operation is isolated from the reactor pressure vessel.

*If not performed within the previous 31 days.

**Detector levels A and C of one LPRM string per core octant plus detectors A and C of one LPRM string in the center of the core should be monitored.

ADMINISTRATIVE CONTROLS

CORE OPERATING LIMITS REPORT

6.9.1.9 Core Operating Limits shall be established prior to each reload cycle, or prior to any remaining portion of a reload cycle, and shall be documented in the CORE OPERATING LIMITS REPORT for the following:

- a. The AVERAGE PLANAR LINEAR HEAT GENERATION RATE (APLHGR) for Specification 3.2.1,
- b. MAPFAC(P) and MAPFAC(F) factors for Specification 3.2.1,
- c. The MINIMUM CRITICAL POWER RATIO (MCPR) for Specification 3.2.3,
- d. The MCPR(P) and MCPR(F) adjustment factors for specification 3.2.3,
- e. The LINEAR HEAT GENERATION RATE (LHGR) for Specification 3.2.4,
- f. The power biased Rod Block Monitor setpoints and the Rod Block Monitor MCPR OPERABILITY limits of Specification 3.3.6,
- g. The Reactor Coolant System Recirculation Flow upscale trip setpoint and allowable value for Specification 3.3.6,
- h. The Recirculation MG set mechanical and electrical overspeed stop setpoints for Specification 4.4.1.1.2.

6.9.1.10 The analytical methods used to determine the core operating limits shall be those previously reviewed and approved by the NRC, specifically those described in the following document:

- a. NEDE-24011-P-A "General Electric Standard Application for Reactor Fuel" (Latest approved revision).

6.9.1.11 The core operating limits shall be determined such that all applicable limits (e.g., fuel thermal-mechanical limits, core thermal-hydraulic limits, ECCS limits, nuclear limits such as SHUTDOWN MARGIN, transient analysis limits, and accident analysis limits) of the safety analysis are met.

6.9.1.12 The CORE OPERATING LIMITS REPORT, including any mid-cycle revisions or supplements, shall be provided upon issuance for each reload cycle to the NRC Document Control Desk with copies to the Regional Administrator and Resident Inspector.

SPECIAL REPORTS

6.9.2 Special reports shall be submitted to the Regional Administrator of the Regional Office of the NRC within the time period specified for each report.

TABLE 3.3.6-2 (Continued)

CONTROL ROD BLOCK INSTRUMENTATION SETPOINTS

| <u>TRIP FUNCTION</u> | <u>TRIP SETPOINT</u> | <u>ALLOWABLE VALUE</u> |
|---|-----------------------------------|-----------------------------------|
| 4. <u>INTERMEDIATE RANGE MONITORS</u> | | |
| a. Detector not full in | N.A. | N.A. |
| b. Upscale | ≤ 108/125 divisions of full scale | ≤ 110/125 divisions of full scale |
| c. Inoperative | N.A. | N.A. |
| d. Downscale | ≥ 5/125 divisions of full scale | ≥ 3/125 divisions of full scale |
| 5. <u>SCRAM DISCHARGE VOLUME</u> | | |
| a. Water Level-High | ≤ 257' 7 3/8" elevation*** | ≤ 257" 9 3/8" elevation |
| a. Float Switch | | |
| 6. <u>REACTOR COOLANT SYSTEM RECIRCULATION FLOW</u> | | |
| a. Upscale | ***** | ***** |
| b. Inoperative | N.A. | N.A. |
| c. Comparator | ≤ 10% flow deviation | ≤ 11% flow deviation |
| 7. <u>REACTOR MODE SWITCH SHUTDOWN POSITION</u> | N.A. | N.A. |

* The rod block function varies as a function of recirculation loop drive flow (W). The trip setting of the average power range monitor rod block function must be maintained in accordance with Specification 3.2.2.

** May be reduced, provided the source range monitor has an observed count rate and signal-to-noise ratio on or above the curve shown in Figure 3.3.6-1.

*** Equivalent to 13.56 gallons/scram discharge volume.

**** The value of N is shown in the CORE OPERATING LIMITS REPORT in accordance with Specifications 6.9.1.9 thru 6.9.1.12.

***** Refer to COLR for these setpoints.

REACTOR COOLANT SYSTEM

SURVEILLANCE REQUIREMENTS

4.4.1.1.1 Each pump discharge valve shall be demonstrated OPERABLE by cycling each valve through at least one complete cycle of full travel during each startup* prior to THERMAL POWER exceeding 25% of RATED THERMAL POWER.

4.4.1.1.2 Each pump MG set scoop tube mechanical and electrical stop shall be demonstrated OPERABLE with overspeed setpoints less than or equal to the setpoints as noted in the CORE OPERATING LIMITS REPORT, as a percentage of rated core flow, at least once per 24 months.

4.4.1.1.3 Establish a baseline APRM and LPRM** neutron flux noise value within the regions for which monitoring is required (Specification 3.4.1.1, ACTION c) within 2 hours of entering the region for which monitoring is required unless baselining has previously been performed in the region since the last refueling outage.

4.4.1.1.4 With one reactor coolant system recirculation loop not in operation, at least once per 12 hours verify that:

- a. Reactor THERMAL POWER is \leq 70% of RATED THERMAL POWER,
- b. The recirculation flow control system is in the Local Manual mode, and
- c. The speed of the operating recirculation pump is \leq 90% of rated pump speed.
- d. Core flow is greater than 39% when THERMAL POWER is within the restricted zone of Figure 3.4.1.1-1.

4.4.1.1.5 With one reactor coolant system recirculation loop not in operation, within 15 minutes prior to either THERMAL POWER increase or recirculation loop flow increase, verify that the following differential temperature requirements are met if THERMAL POWER is \leq 30% of RATED THERMAL POWER or the recirculation loop flow in the operating recirculation loop is \leq 50% of rated loop flow:

- a. \leq 145°F between reactor vessel steam space coolant and bottom head drain line coolant,
- b. \leq 50°F between the reactor coolant within the loop not in operation and the coolant in the reactor pressure vessel, and
- c. \leq 50°F between the reactor coolant within the loop not in operation and the operating loop.

The differential temperature requirements of Specification 4.4.1.1.5b. and c. do not apply when the loop not in operation is isolated from the reactor pressure vessel.

*If not performed within the previous 31 days.

**Detector levels A and C of one LPRM string per core octant plus detectors A and C of one LPRM string in the center of the core should be monitored.

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- a. The AVERAGE PLANAR LINEAR HEAT GENERATION RATE (APLHGR) for Specification 3.2.1,
- b. The MINIMUM CRITICAL POWER RATIO (MCPR) for Specification 3.2.3,
- c. The K, core flow adjustment factor for specification 3.2.3,
- d. The LINEAR HEAT GENERATION RATE (LHGR) for Specification 3.2.4,
- e. The upscale flow biased Rod Block Monitor setpoint and the upscale high flow clamped Rod Block monitor setpoint of Specification 3.3.6,
- f. The Reactor Coolant System Recirculation Flow upscale trip setpoint and allowable value for Specification 3.3.6,
- g. The Recirculation MG set mechanical and electrical overspeed stop setpoints for Specification 4.4.1.1.2.

6.9.1.10 The analytical methods used to determine the core operating limits shall be those previously reviewed and approved by the NRC, specifically those described in the following document:

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6.9.1.11 The core operating limits shall be determined such that all applicable limits (e.g., fuel thermal-mechanical limits, core thermal-hydraulic limits, ECCS limits, nuclear limits such as SHUTDOWN MARGIN, transient analysis limits, and accident analysis limits_ of the safety analysis are met.

6.9.1.12 The CORE OPERATING LIMITS REPORT, including any mid-cycle revisions or supplements, shall be provided upon issuance for each reload cycle to the NRC Document Control Desk with copies to the Regional Administrator and Resident Inspector.

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