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Regulatory Docket File

April 23, 1976



Mr. Benard C. Rusche, Director
 Office of Nuclear Reactor Regulation
 U.S. Nuclear Regulatory Commission
 Washington, D.C. 20555

Subject: Dresden Station Unit 3, License No. DPR-25
 Quad-Cities Station Unit 2, License No. DPR-30
 Proposed Amendment to Appendix A Technical
 Specifications for the Facility Licenses
 NRC Docket Nos. ~~50-227~~ and 50-265

50-249

Reference (a): D. L. Ziemann letter to R. L. Bolger
 dated March 1, 1976.



Dear Mr. Rusche:

The enclosed Technical Specification change is in response to the request of reference (a) to incorporate specific regulatory actions into the limiting condition for operation for the MAFBOR, LHGR, and MCPR sections. The changes requested modified for incorporation into the Dresden and Quad-Cities Technical Specifications are indicated on the enclosed pages 3.5/4.5-9, 3.5/4.5-10, and 3.5/4.5-10A for Quad-Cities Unit 2 and pages 81B, 81B-1, and 81D for Dresden Unit 3.

The proposed changes have received On-Site and Off-Site review. There is no objection to the proposed Technical Specification amendments.

Three (3) signed originals and 57 copies of this letter as well as 40 copies of each license change are provided for your use.

Very truly yours,

R. L. Bolger

R. L. Bolger
 Assistant Vice President

SUBSCRIBED and SWORN to
 before me this 23rd day
 of April, 1976.

Nancy M. Hollingsworth
 Notary Public

My Commission Expires September 24, 1978

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cycle by assuring that water can be run through the drain lines and actuating the air-operated valves by operation of the following sensors:

- 1) loss of air
 - 2) equipment drain sump high level
 - 3) vault high level
- d. The condenser pit 5-foot trip circuits for each channel shall be checked once a month. A logic system functional test shall be performed during each refueling outage.

I. Average Planar LHGR

1. During steady-state power operation, the average linear heat generation rate (LHGR) of all the rods in any fuel assembly, as a function of average planar exposure, at any axial location, shall not exceed the maximum average planar LHGR shown in Figure 3.5-1. If at

any time during operation it is determined by normal surveillance that the limiting value for APLHGR is being exceeded, action shall be initiated within 15 minutes to restore operation to within the prescribed limits. If the APLHGR is not returned to within the prescribed limits within two (2) hours, the reactor shall be brought to the Cold Shutdown condition within 36 hours. Surveillance and corresponding action shall continue until reactor operation is within the prescribed limits.

I. Average Planar LHGR

The APLHGR for each type of fuel as a function of average planar exposure shall be determined daily during reactor operation at $\geq 25\%$ rated thermal power.

J. Local LHGR

During steady-state power operation, the linear heat generation rate (LHGR) of any rod in any fuel assembly at any axial location shall not exceed the maximum allowable LHGR as calculated by the following equation.

$$\text{LHGR}_{\text{max}} < \text{LHGR}_d \left[1 - (\Delta P/P)_{\text{max}} (L/L_T) \right]$$

where:

LHGR_d = design LHGR

= 17.5 kW/ft, 7 x 7 fuel assemblies

= 13.4 kW/ft, 8 x 8 fuel assemblies

$(\Delta P/P)_{\text{max}}$ = maximum power spiking penalty

= .035 initial core fuel

= .029 reload 1, 7 x 7 fuel

= .022 reload, 8 x 8 fuel

= .028 reload 1, mixed oxide fuel

L_T = total core length

= 12 feet

L = Axial distance from bottom of core

J. Local LHGR

The LHGR as a function of core height shall be checked daily during reactor operation at $\geq 25\%$ rated thermal power.

If at any time during operation it is determined by normal surveillance that the limiting value for LHGR is being exceeded, action shall be initiated within 15 minutes to restore operation to within the prescribed limits. If the

LHGR is not returned to within the prescribed limits within two (2) hours, the reactor shall be brought to the Cold Shutdown condition within 36 hours. Surveillance and corresponding action shall continue until reactor operation is within the prescribed limits.

QUAD-CITIES
DPR-30

K. Minimum Critical Power Ratio (MCPR)

During steady-state operation MCPR shall be greater than or equal to

1.29 (7 x 7 fuel)

1.35 (8 x 8 fuel)

at rated power and flow. For core flows other than rated, these nominal values of MCPR shall be increased by a factor of K_r , where K_r is as shown in Figure 3.5-2.

If at any time during operation it is determined by normal surveillance that the limiting value for MCPR is being exceeded, action shall be initiated within 15 minutes to restore operation to within the prescribed limits. If the steady state MCPR is not returned to within the prescribed limits within two (2) hours, the reactor shall be brought to the Cold Shutdown condition within 36 hours. Surveillance and corresponding action shall continue until reactor operation is within the prescribed limits.

K. Minimum Critical Power Ratio (MCPR)

MCPR shall be determined daily during reactor power operation at $> 25\%$ rated thermal power and following any change in power level or distribution that would cause operation with a limiting control rod pattern as described in the bases for Specification 3.3.B.5.

3.5 LIMITING CONDITION FOR OPERATION**I. Average Planar LHGR**

During steady state power operation, the average linear heat generation rate (LHGR) of all the rods in any fuel assembly, as a function of average planar exposure, at any axial location, shall not exceed the maximum average planar LHGR shown in Figure 3.5.1. If at any time during operation it is determined by normal surveillance that the limiting value for APLHGR is being exceeded, action shall be initiated within 15 minutes to restore operation to within the prescribed limits. If the APLHGR is not returned to within the prescribed limits within two (2) hours, the reactor shall be brought to the Cold Shutdown condition within 36 hours. Surveillance and corresponding action shall continue until reactor operation is within the prescribed limits.

4.5 SURVEILLANCE REQUIREMENT**I. Average Planar Linear Heat Generation Rate (APLHGR)**

The APLHGR for each type of fuel as a function of average planar exposure shall be determined daily during reactor operation at \geq 25% rated thermal power.

3.5 LIMITING CONDITION FOR OPERATION

J. Local LHGR

During steady state power operation, the linear heat generation rate (LHGR) of any rod in any fuel assembly, at any axial location, shall not exceed the maximum allowable LHGR as calculated by the following equation:

$$\text{LHGR}_{\text{max}} \leq \text{LHGR}_d \left[1 - \left(\frac{\Delta P}{P} \right)_{\text{max}} \left(\frac{L}{LT} \right) \right]$$

LHGR

d = Design LHGR = 17.5 Kw/ft. 7x7 fuel

= 13.4, 8x8 fuel

$\left(\frac{\Delta P}{P} \right)_{\text{max}}$ = Maximum power spiking penalty =
0.036 for 7x7 fuel and 0.026
for 8x8 fuel

LT = Total core length = 12 ft.

L = Axial position above bottom of core

If at any time during operation, it is determined by normal surveillance that the limiting value for LHGR is being exceeded, action shall be initiated within 15 minutes to restore operation to within the prescribed limits. If the LHGR is not returned to within the prescribed limits within two (2) hours, the reactor shall be brought to the Cold Shutdown condition within 36 hours. Surveillance and corresponding action shall continue until reactor operation is within the prescribed limits.

4.5 SURVEILLANCE REQUIREMENT

J. Linear Heat Generation Rate (LHGR)

The LHGR as a function of core height shall be checked daily during reactor operation at $\geq 25\%$ rated thermal power.

3.5 LIMITING CONDITION FOR OPERATION

K. Minimum Critical Power Ratio (MCPR)

During steady state operation, MCPR shall be greater than or equal to -

Unit 3

1.29 (7 x 7 fuel)

1.35 (8 x 8 fuel)

at rated power and flow. For core flows other than rated, these nominal values of MCPR shall be increased by a factor of K_f , where K_f is as shown in Figure 3.5-2.

If at any time during steady state power operation, it is determined that the limiting value for MCPR is being exceeded, action shall be initiated within 15 minutes to restore operation to within the prescribed limits. If the steady state MCPR is not returned to within the prescribed limits within two (2) hours, the reactor shall be brought to the Cold Shutdown condition within 36 hours. Surveillance and corresponding action shall continue until reactor operation is within the prescribed limits. For core flows other than rated, the MCPR shall be 1.32 times K_f where K_f is as shown in Figure 3.5-2.

4.5 SURVEILLANCE REQUIREMENTS

K. Minimum Critical Power Ratio (MCPR)

MCPR shall be determined daily during a reactor power operation at \geq 25% rated thermal power and following any change in power level or distribution that would cause operation with a limiting control rod pattern as described in the bases for Specification 3.3.B.5.