

ATTACHMENT 1

Proposed Change to DPR-30

Pages 3.5/4.5-10  
3.6/4.6-4

6882N

Quad Cities  
DPR-30

within the prescribed limit within 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. Maximum allowable LHGR for all 8X8 fuel types is 13.4 KW/ft.\*

K. Minimum Critical Power Ratio (MCPR)

During steady-state operation at rated core flow, MCPR shall be greater than or equal to:

1.34 for  $T_{ave} \leq 0.73$  secs

1.39 for  $T_{ave} \geq 0.86$  secs

$0.385 T_{ave} + 1.059$   
for  $0.73 < T_{ave} < 0.86$  secs

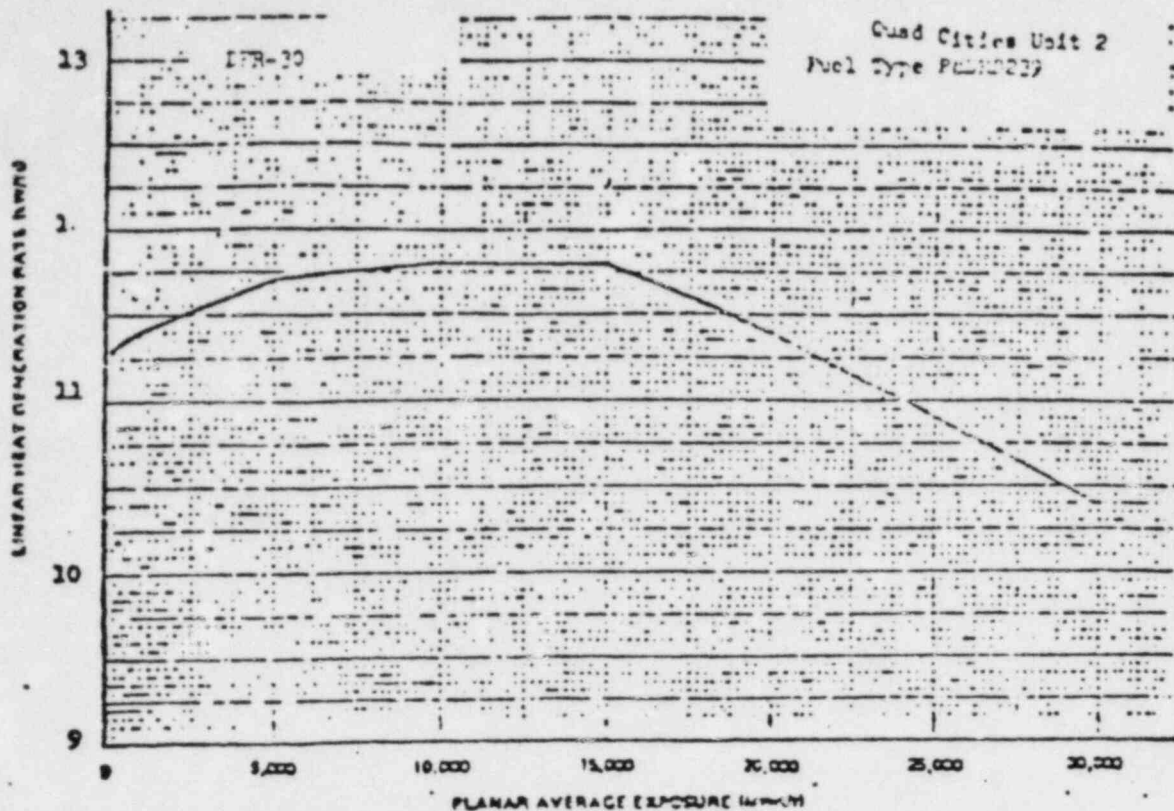
where  $T_{ave}$  = mean 20% scram insertion  
time for all surveillance  
data from Specification  
4.3.C which has been generated in the current cycle.

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 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 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 (MCPR)

The MCPR shall be determined daily during steady-state power operation above 25% of rated thermal power.

\* For the purpose of the end-of-cycle 6 Barrier Fuel Ramp Test, the steady-state LHGR for the Barrier Ramp Cell fuel may exceed the maximum allowable LHGR identified in Technical Specification 3.5.J by no more than 10 percent (14.7 KW/ft), effective from initiation of the test until the end of operation Cycle 6 shutdown.



MAXIMUM AVERAGE PLANAR LINEAR HEAT GENERATION RATE (MAPLHGR)  
VERSUS PLANAR AVERAGE EXPOSURE

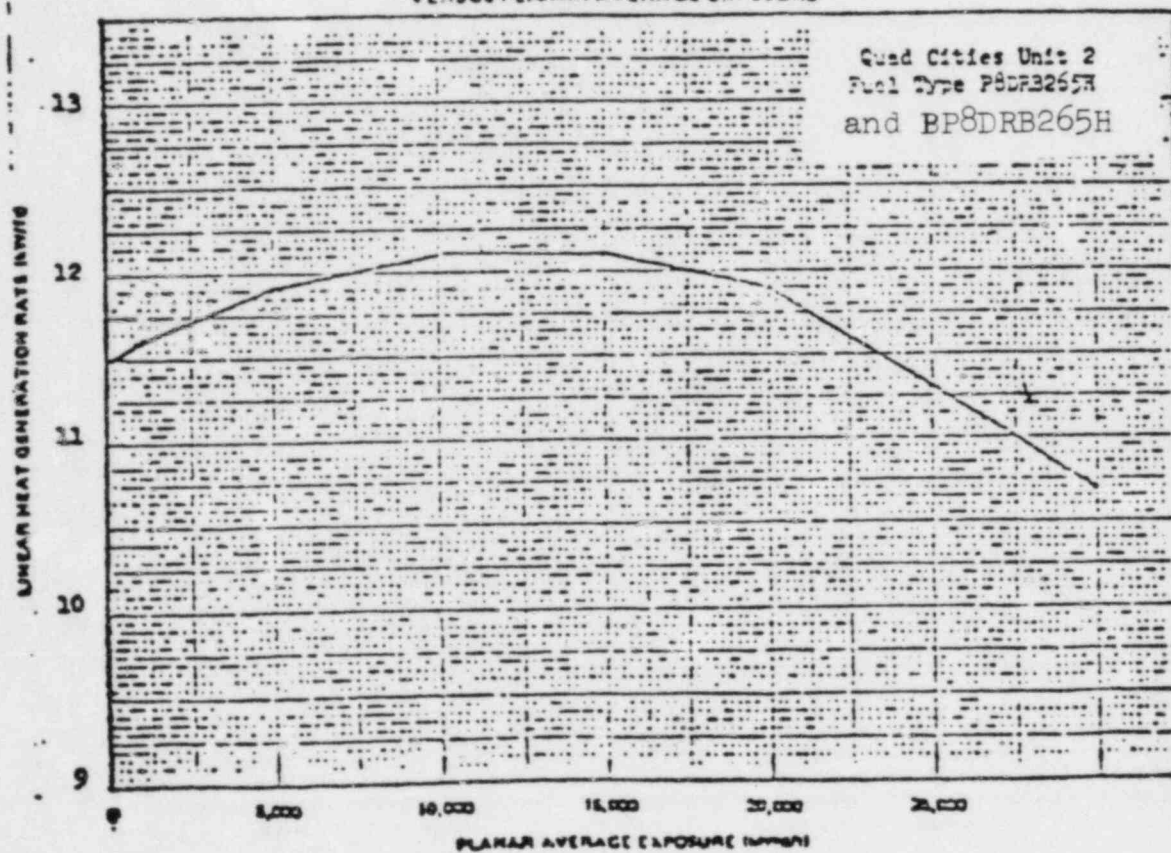


Figure 3.5-1 Maximum Average Planar Linear Heat Generation  
Rate (MAPLHGR) vs. Planar Average Exposure  
(Sheet 3 of 5)

## ATTACHMENT 2

### Discussion of Quad Cities Unit 2 Reload 6, Cycle 7 (Q2R6C7) Proposed Technical Specifications Changes

The purpose of the proposed Q2R6C7 changes is to update the Technical Specifications to reflect:

- a) reduction of the MCPR operating limit to 1.34 to provide additional operating margin afforded by the Q2R6C7 reload analyses.
- b) applicability of existing non-barrier fuel MAPLHGR limits to the Q2C7 barrier reload fuel (type BP8DRB265H)

Both of these changes are specifically addressed in the following sections.

#### MCPR Limits

The current Quad Cities Unit 2 Technical Specifications establish an ODYN "option B" MCPR operating limit of 1.37. The option B approach takes credit for actual scram time performance relative to the Technical Specifications surveillance limits and therefore requires a scram time conformance surveillance. Exceeding the surveillance criterion ( $Z_B$ ) invokes a MCPR penalty in the form of a linearly increasing limit between the option B value (currently 1.37) and the option A value (1.42). The Q2R6C7 reload analysis (see Attachment 4 section 12) establish a Cycle 7 option B MCPR limit of 1.32 (which bounds the results for all Cycle 7 fuel types) based on the load rejection without bypass event. Full reduction of the Technical Specifications to the allowable 1.32 MCPR value could require future Technical Specification changes if subsequent reload require slightly higher MCPR limits. Therefore, in order to simultaneously preserve the option to review future reloads under 10 CFR 50.59 and improve plant operating margin to MCPR, a value of 1.34 is proposed for the Technical Specifications option B MCPR limit. Based on the option A value provided in Attachment 4 (increased by 0.02 for the above reason), the linearly increasing MCPR penalty was determined and included in the proposed specification change.

The reduction in the operating MCPR limit calculated by GE (from 1.37 to 1.32 for ODYN option B) is largely a result of improved assumptions in analyses assumed that the recirculation pump M/G set which is driven from the generator would transfer to off-site power in 0.42 seconds. This transfer actually occurs in less than 0.1 seconds which precludes recirculation pump run-up during the postulated load reject without bypass event.



MAPLHGR Limits

Reference (c) contains the previously approved ECCS analysis for Quad Cities Units 1 and 2 and continues to serve as the basis for the MAPLHGR limits. The proposed Technical Specifications change (Attachment 1) revises the MAPLHGR curve for fuel type P8DRB265H to also apply to the Cycle 7 barrier reload fuel (fuel type BP8DRB265H) which exhibits the same MAPLHGR limit behavior as a function of exposure. The application of non-barrier MAPLHGR limits to barrier fuel of the same nuclear design was confirmed by GE and has been previously approved by the NRC (see Technical Specification 3.5-1 sheet 2). This label change is therefore administrative and in our assessment is not required for Q2C7 operation since there is a precedent from the previous reload that the non-barrier MAPLHGR limits apply to barrier fuel. However, to avoid confusion, the label change is being formally submitted.

Errata and Addenda sheets for the Reference 4 LOCA analysis are included in Attachment 5 for your review.

### ATTACHMENT 3

#### 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(e), operation of Quad Cities Unit 2 in accordance with the proposed amendments will not:

- 1) involve a significant increase in the probability or consequences of an accident previously evaluated because:
  - a) the amendments involve restrictions on the reactor power distribution during normal operation which of itself cannot initiate an accident and therefore does not increase the probability of an accident and
  - b) these restrictions on power distribution are based on a reanalysis or re-evaluation of operating transients and accidents in accordance with NRC approved methods and are specifically provided to ensure that the consequences of transients or accidents (LOCA) during Q2C7 remain within the existing safety limits and accident criteria established for Quad Cities.
- 2) create the possibility of a new or different kind of accident from any accident previously evaluated for the same reason as (1)a. above and
- 3) involve a significant reduction in the margin of safety since the amendments are specifically intended to ensure that the MCPR Fuel Cladding Integrity Safety Limit and the 10 CFR 50.46 ECCS criteria continue to be protected during Cycle 7 operation.

In consideration of the above, Commonwealth Edison expects that NRC approval of these amendments should not be predicated on satisfactory resolution of public comments or intervention as provided for by 10 CFR 50.91(a)(4).