

February 9, 1996



Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

ATTN: Document Control Desk

SUBJECT: Byron Nuclear Power Station Unit 1
Cycle 7 Reanalyses and Operating Limits Report
NRC Docket No. 50-454

Byron Unit 1 has recently completed startup following the Cycle 7 Mid-Cycle Steam Generator Inspection. Reanalyses to implement up to a 2°F Tave increase and to address the steam generator tube plugging (SGTP) have been performed. The purpose of this letter is to advise you of ComEd's review of the Cycle 7 reanalyses under the provisions of 10CFR50.59 and to transmit the revised core Operating Limits Report (OLR) for the remainder of Cycle 7 consistent with Generic Letter 88-16.

The BY1C7 core loading pattern has not changed. All BY1C7 design characteristics remain valid, with the analyzed increase in Tave. The BY1C7 reanalyses supports a maximum average SGTP level of 24% and a peak level of 30% in up to three steam generators. The Byron Unit 1 core, which consists of NRC approved fuel designs, was designed to operate within approved fuel design criteria, Technical Specifications and related bases such that:

- 1) core operating characteristics will be equivalent to or less limiting than those previously reviewed and accepted; or
- 2) re-analyses or re-evaluations have been performed to demonstrate that the limiting postulated UFSAR events which could be affected by the reload are within allowable limits.

The reload licensing reanalyses which were performed for the remainder of Cycle 7 utilized NRC-approved methodologies. The cycle-specific power distribution limits for remaining operation of Cycle 7 are presented in the attached core OLR revision.

ComEd has performed a detailed review of the revised reload licensing documents, the associated bases, and references. Based on that review, a safety evaluation was prepared, as required by 10CFR50.59, which concluded that the reanalyses present no unreviewed safety questions and require no Technical Specification changes. The Byron On-Site review of the 10CFR50.59 safety evaluation has been completed.

Finally, since there is no change in the core design or the assumed key design parameters, except for the increased Vessel Tave from 582 °F to ≤ 584°F, the standard reload startup physics tests, as recommended in ANSI/ANS 19.6.1, are not required for

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the BY1C7 redesign. However, testing has been completed which demonstrated that the SGTP has not impacted the assumed minimum design flow through appropriate calorimetric tests.

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

Very truly yours,



Marcia Lesniak
Nuclear Licensing Administrator

Attachment - Operating Limits Report, Byron Unit 1 Cycle 7, Revision 3

cc:

H. Miller, Regional Administrator - RIII
G. Dick, Byron Project Manager - NRR
H. Peterson, Senior Resident Inspector - Byron
Office of Nuclear Facility Safety - IDNS