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 MURLEY, T.E. Office of Nuclear Reactor Regulation, Director (Post 870411)

SUBJECT: Application for amend to License DPR-49, consisting of TS
Change RTS-229, deleting cycle-specific parameter limits.

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Iowa Electric Light and Power Company
January 5, 1990
NG-90-0002

Dr. Thomas E. Murley
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D.C. 20555

Subject: Duane Arnold Energy Center
Docket No: 50-331
Request for Technical Specification Change
(RTS-229): Deletion of Cycle-Specific
Parameter Limits
File: A-117, A-101b, J-60a

Dear Mr. Murley:

In accordance with the Code of Federal Regulations, Title 10, Sections 50.59 and 50.90, Iowa Electric Light and Power Company hereby requests revision of the Technical Specifications (TSs) for the Duane Arnold Energy Center (DAEC). This application for revision reflects changes necessary to remove cycle-specific parameter limits from the TS and follows the guidance of Generic Letter 88-16.

This entire application, RTS-229 (Attachments 1 through 3), has been reviewed by the DAEC Operations Committee and the DAEC Safety Committee.

A copy of this submittal, which includes a no significant hazards analysis, is being forwarded to our appointed State Official pursuant to the requirements of 10 CFR 50.91.

This application is true and accurate to the best of my knowledge and belief.

IOWA ELECTRIC LIGHT AND POWER COMPANY

By *Daniel Mineck*
DANIEL L. MINECK
Manager, Nuclear Division

Subscribed and sworn to before me on
this 8th day of January, 1990.

Helen M. Jermoluk
Notary Public in and for the State of Iowa

- Attachments: 1) Evaluation of Change Pursuant to 10 CFR 50.92
2) Proposed Change RTS-229 to the Duane Arnold Energy Center Technical Specifications and List of Affected Pages
3) Proposed CORE OPERATING LIMITS REPORT

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EVALUATION OF CHANGE PURSUANT TO 10 CFR 50.92

BACKGROUND

The cycle-specific parameters in the DAEC Technical Specifications are currently revised every reload cycle. These revisions are developed using methodologies and analyses already approved by the NRC (Amendments 10 and 13 to General Electric's Standard Application for Reactor Fuel (GESTAR-II)). Generic Letter 88-16, "Removal of Cycle-Specific Parameter Limits from Technical Specifications," provided guidance to licensees on elimination of these cycle-specific parameters from the TSs.

Generic Letter 88-16 specifies three actions in order to permit elimination of the cycle-specific parameter limits. These actions are: (1) the addition of the definition of a named formal report that includes the values of cycle-specific parameter limits that have been established using an NRC-approved methodology and consistent with all applicable limits of the safety analysis, (2) the addition of an administrative reporting requirement to submit the formal report on cycle-specific parameter limits to the Commission for information, and (3) the modification of individual TS to note that cycle-specific parameters shall be maintained within the limits provided in the defined formal report.

This proposed amendment would make changes in the Technical Specifications to remove cycle-specific parameter limits in accordance with the guidance of Generic Letter 88-16.

In addition, the proposed amendment would relocate the cycle-specific parameter limit for the MCPR safety limit to the CORE OPERATING LIMITS REPORT. The MCPR safety limit is determined for each cycle using NRC-approved methodologies and can change due to types and configuration of fuel loaded. It is appropriate to eliminate the necessity for a Technical Specification change for each reload cycle by means of this change.

Changes to Surveillance Requirements applicable to parameter limits and administrative changes to the Bases have also been made to improve clarity.

Iowa Electric Light and Power Company, Docket No. 50-331

Duane Arnold Energy Center, Linn County, Iowa

Date of Amendment Request: January 5, 1990

Description of Amendment Request: The proposed License Amendment would revise the DAEC TSs to eliminate the need for requesting cycle-specific changes to the TSs for future core reloads.

In accordance with the guidance provided in GL 88-16, the proposed revision requires use of NRC approved methodologies for calculating the numeric values of cycle-dependent parameters. These parameters will be deleted from the TSs and included in the CORE OPERATING LIMITS REPORT. This report will be defined in TS

Section 1.0. In addition, TS Section 6.0, Administrative Controls, will be revised to require preparation of the CORE OPERATING LIMITS REPORT. Attachment 3 is a sample CORE OPERATING LIMITS REPORT provided for information purposes only. Administrative changes to the TSSs, including the Bases and Surveillance Requirements, will also be made.

This revision is consistent with current NRC and industry efforts to simplify the TSSs and provides adequate assurance that the correct limits will be followed in operating the DAEC.

Basis for proposed no significant hazards consideration:

The Commission has provided standards (10 CFR 50.92(c)) for determining whether a significant hazards consideration exists. A proposed amendment to an operating license for a facility involves no significant hazards consideration if operation of the facility in accordance with the proposed amendment would not (1) involve a significant increase in the probability or consequences of an accident previously evaluated; (2) create the possibility of a new or different kind of accident from any accident previously evaluated; or (3) involve a significant reduction in a margin of safety.

- (1) The proposed change will not involve any significant increase in the probability or consequences of an accident previously evaluated because the removal of the cycle-specific parameter limits from the DAEC Technical Specifications has no influence on the consequences or the probability of a previously evaluated accident. The cycle-specific parameter limits, although not in the TSSs, will continue to apply and be followed in the operation of the DAEC. The proposed amendment will require the same actions to be taken when or if limits are exceeded as are required by the current Technical Specifications.

Each accident previously addressed will continue to be examined with respect to changes in cycle-specific parameters, which are obtained from application of NRC approved reload design methodologies, to ensure that transient evaluations of reloads are bounded by previously accepted analyses. This examination, which will be performed in accordance with the requirements of 10 CFR 50.59, ensures that future reloads will not involve an increase in the probability or consequences of an accident previously evaluated.

The MAPLHGR, LHGR and MCPR surveillance requirements are revised for improved clarity only; none of the surveillance requirements are changed. The deletion of the requirement to determine MCPR every 12 hours during a Limiting Control Rod Pattern achieves consistency with the LHGR and MAPLHGR surveillances and eliminates an unnecessary requirement. TSSs still require that MCPR be determined daily and after changes in power level or distribution which can affect the MCPR value. TSSs Section 3.3.B.5 still requires that the RBM system be operable prior to control rod withdrawal during operation with a Limiting Control Rod Pattern. Therefore, the Surveillance Requirement that has been removed is unnecessary and redundant to other requirements.

The Surveillance Requirement changes and the changes to the Bases are administrative in nature and cannot significantly increase the probability or consequences of a previously evaluated accident.

- (2) The removal of the cycle-specific parameters will have no impact on the probability or consequences of any accidents. The cycle-specific parameters are calculated using NRC approved methodologies and will be available in the CORE OPERATING LIMITS REPORT. The Technical Specifications will continue to require operation within the stated limits and appropriate actions will be taken when or if the limits are exceeded.

The changes to the Surveillance Requirements and Bases are administrative and cannot create the possibility of a new or different kind of accident. The TSs still require that MAPLHGR, LHGR and MCPR be determined daily (at power levels $\geq 25\%$) and MCPR must still be determined after power level or distribution changes which can affect its value. The change to Bases Section 3.12.C.1 only clarifies our use of a setpoint methodology for determining inputs to the transient analysis.

- (3) The margin of safety will not be affected by the removal of the cycle-specific parameter limits from the TSs because the proposed amendment still requires operation within the core limits determined by use of NRC-approved reload design methodologies. The appropriate actions to be taken when or if limits are violated remain unchanged.

The development of the limits for future reloads will continue to conform to those methods described in NRC-approved documentation. In addition, a 10 CFR 50.59 Safety Evaluation will be done for each future reload to assure that operation within the cycle-specific parameter limits will not involve a significant reduction in a margin of safety.

The other changes are administrative only and cannot affect the margin of safety.

We conclude that the proposed amendment, having been evaluated against the requirements of 10 CFR 50.92, does not involve a significant hazards consideration.

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Attorney for Licensee: Jack Newman, Kathleen H. Shea, Newman and Holtzinger, 1615 L Street NW, Washington, DC 20036

PROPOSED CHANGE RTS-229 TO THE DUANE ARNOLD ENERGY CENTER TECHNICAL SPECIFICATIONS

The holders of license DPR-49 for the Duane Arnold Energy Center propose to amend Appendix A (Technical Specifications) to said license by deleting current pages and replacing them with the attached new pages. A description of the changes and the List of Affected Pages are given below.

1. The cycle-specific figures of Section 3.12 have been deleted from the List of Figures.
2. A definition of the CORE OPERATING LIMITS REPORT has been added to TS Section 1.0. The CORE OPERATING LIMITS REPORT will contain the cycle-specific parameters removed from the TSs and will be updated for each reload cycle.
3. The Minimum Critical Power Ratio (MCPR) Safety Limit Specification 1.1.A has been revised to reference the CORE OPERATING LIMITS REPORT for the actual cycle-specific parameter limits.
4. The NOTE in Limiting Safety System Setting 2.1.A.1 has been revised to reference the CORE OPERATING LIMITS REPORT for actual cycle-specific parameter limits of Linear Heat Generation Rate and Minimum Critical Power Ratio. In addition, page number 1-1.2 has been corrected to 1.1-2.
5. Revision date for reference 3 to Section 3.5 has been deleted. A note has been added stating that the report is cycle dependent.
6. Jet pump flow mismatch Specification 3.6.F.2.a has been revised to reference the CORE OPERATING LIMITS REPORT for actual MAPLHGR multiplier values.
7. Maximum Average Planar Linear Heat Generation Rate (MAPLHGR) Specifications 3.12.A.1 and 3.12.A.2 have been revised to be consistent with the Improved BWR Technical Specifications (NEDC-31681) and to state that the actual cycle-specific parameter limits are contained in the CORE OPERATING LIMITS REPORT. Surveillance requirement 4.12.A has been reworded for clarity. Specifications 3.12.A.3-5 have been renumbered accordingly.
8. Linear Heat Generation Rate (LHGR) Specification 3.12.B.1 has been revised to be consistent with the Improved BWR Technical Specifications (NEDC-31681) and to reference the CORE OPERATING LIMITS REPORT for the actual cycle-specific parameter limits. Surveillance requirement 4.12.B has been revised for greater clarity.
9. Minimum Critical Power Ratio (MCPR) Specifications 3.12.C.1 and 3.12.C.2 have been revised to be consistent with the Improved BWR Technical Specifications (NEDC-31681) and to reference the CORE OPERATING LIMITS REPORT for the actual cycle-specific parameter limits. Surveillance requirement 4.12.C has been revised for greater for clarity and the

requirement to determine MCPR every 12 hours during operation with a Limiting Control Rod Pattern has been deleted.

10. The Bases for Sections 3.12/4.12 have been revised to eliminate references to deleted figures and GE 8 fuel, add references to the CORE OPERATING LIMITS REPORT and delete the requirement to determine MCPR every 12 hours with a Limiting Control Rod Pattern. In addition, Bases Section 3.12.C.1 has been expanded to discuss use of a setpoint methodology in determining trip setting inputs to the transient analysis.
11. Technical Specification Figures 3.12-1 through 3.12-12 have been removed and relocated to the CORE OPERATING LIMITS REPORT.
12. Revision date for Reference 2 to Section 3.12 has been deleted. A note states that the report is cycle dependent.
13. The Bases of Technical Specification Section 3.12 have been re-organized, eliminating blank spaces for improved clarity. In addition, the pages of Section 3.12 have been renumbered to eliminate pages numbers 3.12-3a and 3.12-5a and reflect the reorganization of the Bases.
14. An administrative reporting requirement for the CORE OPERATING LIMITS REPORT was added to TS Section 6.11. It details the content and reporting requirements as suggested in GL 88-16.

List of Affected Pages

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1.0-9
1.1-1
1.1-2
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3.6-7a
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3.12-6
3.12-7
3.12-8
3.12-9
3.12-10
6.11-5

- NOTE: 1) Pages viii and 3.12-11 thru 3.12-22 have been deleted.
2) Page numbers 3.12-3a and 3.12-5a have been eliminated.