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NRC PDR
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ORB#3 Rdg
VStello
KRGoller
TJCarter
Attorney, OELD
OI&E (3)
GLear
JShea
KParrish
DEisenhut
TBAbernathy
JRBuchanan
ACRS (16)

Docket No.: 50-331

Iowa Electric Light & Power Company
ATTN: Mr. Duane Arnold, President
P. O. Box 351
Cedar Rapids, Iowa 52406

Gentlemen:

We have completed our preliminary review of the information you submitted with your application dated January 31, 1977, regarding the core reload for fuel cycle 3 at the Duane Arnold Energy Center. We have determined that additional information will be required in order for us to complete our review. Our requirements are detailed in the enclosure.

The additional information requested should be sent to us as soon as possible but within 30 days of your receipt of this letter. If you have any questions on this matter, please contact us.

Sincerely,

Original signed by

George E. Lear, Chief
Operating Reactors Branch #3
Division of Operating Reactors

Enclosure:
Request for Additional
Information

cc w/enclosure: See next page

OFFICE	ORB#3:DOR	C-ORB#3:DOR				
SURNAME	JShea:rm	GLear				
DATE	2/28/77	2/28/77				

Form AEC-318 (Rev. 9-53) AECM 0240 ☆ U. S. GOVERNMENT PRINTING OFFICE: 1974-526-166

cc:

Mr. Robert Lowenstein, Esquire
Harold F. Reis, Esquire
Lowenstein, Newman, Reis and Axelrad
1025 Connecticut Avenue, N. W.
Washington, D. C. 20036

Cedar Rapids Public Library
426 Third Avenue, S. E.
Cedar Rapids, Iowa 52401

ENCLOSURE

REQUEST FOR ADDITIONAL INFORMATION

DAEC RELOAD FOR FUEL CYCLE 3

1. Provide a quantitative discussion of the ΔCPR's given in Table 6-3, NEDO 21082-2.

2. Propose changes to the Technical Specifications which will have the effect of limiting the Reactor Core stability decay ratio, X_2/X_0, to no greater than 0.50. Provide a thermal-hydraulic stability analysis which demonstrates that during limiting reactor core stability conditions, as permitted by the proposed specifications, the decay ratio does not exceed 0.50.

3. Provide analyses and results of any test previously conducted which demonstrate that recirculation pump startup from the natural circulation mode does not cause a reactivity insertion transient in excess of the most severe coolant flow increase currently analyzed. The startup test results shall quote reactivity insertions observed during reactor startup for conditions of recirculation pump startup from natural circulation modes. This concern can be addressed either by the analyses and test data described above, or by a proposed technical specification change which precludes operation with natural circulation flow.

4. Provide a list and briefly describe each physics startup test to be performed for the cycle 3 reload. Also provide the acceptance criterion for each test and discuss how the measured parameter (s) relates to the values in the accident analysis.

5. State your schedule for submitting to NRC a brief summary report of physics startup tests. This report should include both measured and predicted values. If the difference between the measured and predicted value exceeds the acceptance criterion, the report should discuss the actions that were taken and justify the adequacy of these actions.