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Iowa Electric Light and Power Company January 11, 1985 NG-85-0003

Mr. Harold Denton, Director Office of Nuclear Reactor Regulation U.S. Nuclear Regulatory Commission Washington, DC 20555

> Duane Arnold Energy Center Subject: Docket No: 50-331 Op. License No: DPR-49 Technical Specification Changes (RTS-181) Update of NDT Operating Limit Curves File: A-117, J-40b

Dear Mr. Denton:

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PDR

In accordance with the Code of Federal Regulations, Title 10, Parts-50.59 and 50.90, Iowa Electric Light and Power Company hereby requests revision to the Technical Specifications (TS) for the Duane Arnold Energy Center (DAEC).

This proposal adjusts the pressure-temperature operating limits for the Duane Arnold Energy Center reactor vessel and makes the limits valid through 12 effective full power years. This submittal is due 6 months prior to 6 effective full power years, which we presently anticipate to be This proposal also adjusts the vessel head bolting stud July 15, 1985. minimum temperature which was discovered to be higher than necessary and overly conservative. Both of these changes are supported by an analysis performed by General Electric, which is Attachment 3 to this proposal.

This application, proposed change RTS-181, has been reviewed by both our DAEC Operations Committee and DAEC Safety Committee. Per the fee schedule for license amendments (10 CFR 170), a check for \$150 is enclosed. The balance of the application fee will be paid upon billing.

A001 W/check \$ 15000 \$/40 Pursuant to the requirements of 10 CFR 50.91, a copy of this submittal and analysis of no significant hazards considerations is being forwarded to our appointed state official.





Mr. Harold Denton January 11, 1985 NG-85-0003 Page Two

This application, which consists of three signed originals and 37 copies with their enclosures, is true and accurate to the best of my knowledge and belief.

IOWA ELECTRIC LIGHT AND POWER COMPANY ΒY annus Richard W. McGaugdy Manager, Nuclear Division Subscribed and sworn to Before Me on this // day of 1985 \_ 1985/ Notary in and for the State of Towa Public

RWM/MJM/ta\*

Attachments:

1) Evaluation of Change Pursuant to 10 CFR 50.92

- 2) Proposed Change RTS-181 including List of Affected Pages
- 3) General Electric Analysis, NEDC-30839
- cc: M. Murphy
  - L. Liu S. Tuthill M. Thadani

NRC Resident Office T. Houvenagle (ICC)

# EVALUATION OF CHANGE WITH RESPECT TO 10 CFR 50.92

## Summary

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> This Technical Specification change proposal adjusts the pressuretemperature operating limits for the Duane Arnold Energy Center reactor vessel and makes the limits valid through 12 effective full power years. The operating limits were adjusted to account for the minor estimated changes in fracture toughness due to 6 effective full power years of neutron fluence on the vessel. This update is supported by an analysis performed by General Electric which accompanies this proposal.

> Also, the minimum temperature for which the reactor vessel head bolting studs can be in tension is lowered from 100°F to 74°F. Calculations have shown that the former limit of 100°F was overly conservative when established and was much higher than necessary or practical. The correction still includes the appropriate safety margin which is also supported by the G.E. analysis and is in accordance with the requirements of 10 CFR 50 Appendix G.

In accordance with the requirements of 10 CFR 50.92, the enclosed application is judged to involve no significant hazards based upon the following information:

(1) Does the proposed license amendment involve a significant increase in the probability or consequences of an accident previously evaluated?

Response:

Neither the probability nor the consequences of an accident are increased since the operating limits are adjusted to incorporate the original fracture toughness conservatism present, over and above the safety margin, when the reactor vessel was new.

The bolting stud minimum temperature change is a correction of an overly conservative limit and does not increase the probability of occurrence nor the magnitude of the consequences of an accident.

(2) Does the proposed license amendment create the possibility of a new or different kind of accident from any accident previously evaluated?

Response:

The possibility of a new kind of accident is not created since the operating limits are merely being updated according to 10 CFR 50 Appendix G and no physical changes are being made.

The correction of the bolting stud minimum temperature is an adjustment to the limit and does not create a different type of accident. (3) Does the proposed amendment involve a significant reduction in a margin of safety?

### Response:

The margin of safety for the reactor pressure vessel is not being affected. The design margin over and above the margin of safety is actually being restored to a level similar to when the reactor vessel was new and the fracture toughness was slightly greater.

The correction of the bolting stud minimum temperature still includes an adequate margin of safety since the former limit was established too high and was overly conservative.

In the April 6, 1983 Federal Register, the NRC published a list of examples of amendments that are not likely to involve a significant hazards concern. Example number six of that list applies to the changing of the bolting stud minimum temperature and states:

"A change which either may result in some increase to the probability or consequences of a previously-analyzed accident or may reduce in some way a safety margin, but where the results of the change are clearly within all acceptable criteria with respect to the system or component specified in the Standard Review Plan...: for example, a change resulting from the application of a small refinement of a previously used calculational model or design method."