

50-331

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TO: Mr. B.C. Rusche

FROM: Iowa Elec. Light & Power Co,  
Cedar Rapids, Iowa  
Lee Liu

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ENCLOSURE Appl for Amdt to OL/Tech Specs which consists of change RTS 81....(4P)

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ACKNOWLEDGED

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PLANT NAME: Duane Arnold Plant

DHL

SAFETY

FOR ACTION/INFORMATION

ENVIRO

ASSIGNED AD:

BRANCH CHIEF:

PROJECT MANAGER:

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Lee (S)  
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<input checked="" type="checkbox"/> OELD		LAINAS	
<input checked="" type="checkbox"/> GOSSICK & STAFF	ENGINEERING	IPPOLITO	ENVIRO TECH.
MIPC	MACARRY	KIRKWOOD	ERNST
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HOUSTON	ROSZTOCZY	BAER	
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# IOWA ELECTRIC LIGHT AND POWER COMPANY

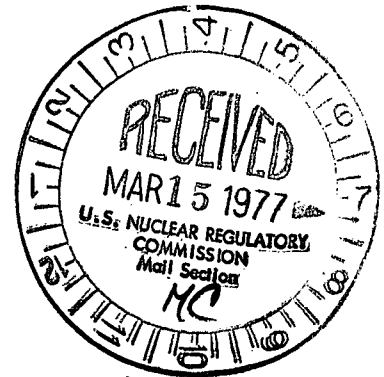
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CEDAR RAPIDS, IOWA  
IE-77-490

LEE LIU  
VICE PRESIDENT - ENGINEERING

March 9, 1977

## Regulatory Docket File

Mr. Benard C. Rusche, Director  
Office of Nuclear Reactor Regulation  
U. S. Nuclear Regulatory Commission  
Washington, D.C. 20545




Dear Mr. Rusche:

Transmitted herewith in accordance with the requirements of 10CFR50.59 and 50.90 is an application for amendment for DPR-49 (Appendix A to License) for the Duane Arnold Energy Center.

This application consisting of proposed Technical Specification Change RTS 81 has been reviewed and approved by the DAEC Operations Committee and the DAEC Safety Committee. This application does not involve a significant hazards consideration.

Three signed and notarized originals and 37 additional copies of this application are transmitted herewith. This application, consisting of the foregoing letter and enclosures hereto, is true and accurate to the best of my knowledge and belief.

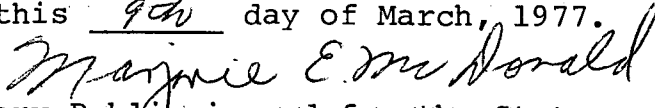
Iowa Electric Light and Power Company

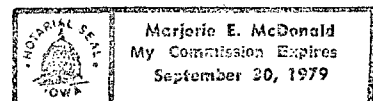
By   
\_\_\_\_\_  
Lee Liu  
Vice President-Engineering

LL/OCS/D  
Enc.

cc:K. Meyer  
D. Arnold  
R. Lowenstein  
J. Shea (NRC)  
J. Keppler (NRC)  
L. Root  
File A-117

Subscribed and Sworn to before me  
on this 9th day of March, 1977.

  
\_\_\_\_\_  
Notary Public in and for the State  
of Iowa.



770740353

## PROPOSED CHANGE RTS-81 TO DAEC TECHNICAL SPECIFICATIONS

### I. Affected Technical Specifications

Appendix A of the Technical Specifications for the DAEC (DPR-49) provides as follows:

Specification 4.6.D.3 states as follows:

"With the reactor pressure  $\geq$  100 psig, each relief valve shall be manually opened until thermocouples downstream of the valve indicate steam is flowing from the valve once per operating cycle."

Specification 3.6.D and 4.6.D Bases (page 3.6-25) state as follows:

"Additionally, once per operating cycle, each relief valve is tested manually with reactor pressure above 100 psig to demonstrate its ability to pass steam."

### II. Proposed Changes in Technical Specifications

The licensees of DPR-49 propose the following changes in the Technical Specifications set forth in I above:

Change Specification 4.6.D.3 as follows:

"With the reactor pressure  $\geq$  100 psig and turbine bypass flow to the main condenser, each relief valve shall be manually opened and verified open by turbine bypass valve position decrease and thermocouple readings downstream of the relief valve to indicate steam flow from the valve once per operating cycle."

Change Specification 3.6.D and 4.6.D Bases as follows:

"Additionally, once per operating cycle, each relief valve is tested manually with reactor pressure above 100 psig and with turbine bypass flow to the main condenser to demonstrate its ability to pass steam. By observation of the change in position of the turbine bypass valve, the relief valve operation is verified."

### III. Justification for Proposed Change

This proposed Technical Specification change is being submitted in response to a request from the Nuclear Regulatory Commission (Letter; Mr. George Lear, Chief, Operating Reactors Branch #3, Division of Operating Reactors, to Mr. Duane Arnold, President, Iowa Electric Light and Power Company; January 3, 1977).

With turbine bypass flow to the main condenser, flow through a relief valve would be indicated by a reduced flow through the turbine bypass valve. This would be a positive indication of relief valve flow since steam leaking through the relief valve actuation mechanism would not be great enough in volume to cause a measurable reduction of flow through the turbine bypass valve.

#### IV. Review Procedures

This proposed change has been reviewed by the DAEC Operations Committee and Safety Committee which have found that this proposed change does not involve a significant hazards consideration.

LIMITING CONDITIONS FOR OPERATION SURVEILLANCE REQUIREMENTS

- 2.
  - a. From and after the date that the safety valve function of one relief valve is made or found to be inoperable, continued reactor operation is permissible only during the succeeding thirty days unless such valve function is sooner made operable.
  - b. From and after the date that the safety valve function of two relief valves is made or found to be inoperable, continued reactor operation is permissible only during the succeeding seven days unless such valve function is sooner made operable.
- 3. If Specification 3.6.D.1 is not met, an orderly shutdown shall be initiated and the reactor coolant pressure shall be reduced to atmospheric within 24 hours.

E. Jet Pumps

- 1. Whenever the reactor is in the startup or run modes, all jet pumps shall be operable. If it is determined that a jet pump is inoperable, an orderly shutdown shall be initiated and the reactor shall be in a Cold Shutdown Condition within 24 hours.

- 2. At least one of the relief valves shall be disassembled and inspected each refueling outage.
- 3. With the reactor pressure  $\geq$  100 psig and turbine bypass flow to the main condenser, each relief valve shall be manually opened and verified open by turbine bypass valve position decrease and thermocouple readings downstream of the relief valve to indicate steam flow from the valve once per operating cycle.

E. Jet Pumps

- 1. Whenever there is recirculation flow with the reactor in the startup or run modes, jet pump operability shall be checked daily by verifying that the following conditions do not occur simultaneously:
  - a. The two recirculation loops have a flow imbalance of 15% or more when the pumps are operated at the same speed.

detect failures or deteriorations. The relief and safety valves are benchtested every second operating cycle to ensure that their setpoints are within the  $\pm 1$  percent tolerance. Additionally, once per operating cycle, each relief valve is tested manually with reactor pressure above 100 psig and with turbine bypass flow to the main condenser to demonstrate its ability to pass steam. By observation of the change in position of the turbine bypass valve, the relief valve operation is verified.

The requirements established above apply when the nuclear system can be pressurized above ambient conditions. These requirements are applicable at nuclear system pressures below normal operating pressures because abnormal operational transients could possibly start at these conditions such that eventual overpressure relief would be needed. However, these transients are much less severe, in terms of pressure, than those starting at rated conditions. The valves need not be functional when the vessel head is removed, since the nuclear system cannot be pressurized.