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 FACIL:50-331 Duane Arnold Energy Center, Iowa Electric Light & Pow 05000331  
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 MINECK,D.L. Iowa Electric Light & Power Co.  
 RECIP.NAME RECIPIENT AFFILIATION  
 MURLEY,T.E. Office of Nuclear Reactor Regulation, Director (Post 870411)

SUBJECT: Advises that util implemented interim recommendations for stability actions,per NRC Bulletin 88-007.

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Iowa Electric Light and Power Company

March 6, 1989

NG-89-0555

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

Subject: Duane Arnold Energy Center  
Docket No: 50-331  
Op. License No: DPR-49  
Response to NRC Bulletin 88-07, Supplement 1,  
"Power Oscillations in Boiling Water Reactors"  
Reference: NG-88-3187, "Response to NRC Bulletin 88-07",  
09/19/88  
File: A-101a, A-107b

Dear Dr. Murley:

Iowa Electric has implemented General Electric's (GE) Interim Recommendations for Stability Actions as requested by NRC Bulletin 88-07, Supplement 1.

For the Duane Arnold Energy Center (DAEC), which uses only GE manufactured fuel, we have grouped regions A, B, and C of GE's recommendations into a single region as shown by the cross-hatched area in the attached figure. An Operating Order is in effect which forbids entry into the cross-hatched area except as necessary to prevent damage to plant equipment or to protect fuel cladding integrity. If instability is not observed while operating in the area, it will be exited as soon as practical by increasing recirculation pump speed or by inserting control rods. Restrictions for this area of the power-to-flow map are in effect during both single and double recirculation pump operation. Control Room operating crews have been trained on the contents of our Operating Order concerning reactor instability.

DAEC Technical Specifications require a manual scram if both recirculation pumps are in the tripped condition with the reactor operating in the RUN mode. Also, DAEC procedures require a manual scram if unstable conditions are detected while the plant is operating in any portion of the power-to-flow operating map. We define an unstable condition to be at least one Average Power Range Monitor (APRM) signal with a bandwidth greater than 10% of rated power with the bandwidth increasing. Inclusion of increasing amplitude in the APRM signal is necessary at the DAEC because 10% peak-to-peak swings are typical during steady state operation near 100% power.

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Dr. Thomas E. Murley  
March 6, 1989  
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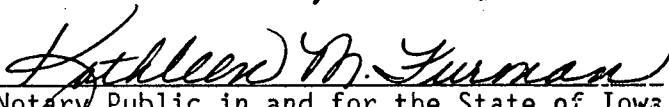
Iowa Electric is an active member of the Boiling Water Reactor Owners' Group (BWROG) committee on reactor stability. We will evaluate long-term corrective actions developed by this committee when they become available.

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

IOWA ELECTRIC LIGHT AND POWER COMPANY

By   
Daniel L. Mineck  
Manager, Nuclear Division

Subscribed and sworn to before me on this  
6<sup>th</sup> day of March, 1989.

  
Notary Public in and for the State of Iowa

DLM/BGH/pjv+

Attachment: 1) Power-to-Flow Operating Map

cc: B. Hopkins  
L. Liu  
L. Root  
R. McGaughy  
J. R. Hall (NRC-NRR)  
A. Bert Davis (Region III)  
NRC Resident Office  
Commitment Control No. 890003

POWER-FLOW MAP

