

Docket Nos. 50-237/249
50-254/265

JAN 04 1977

Commonwealth Edison Company
ATTN: Mr. R. L. Bolger
Assistant Vice President
Post Office Box 767
Chicago, Illinois 60690

Gentlemen:

RE: DRESDEN NUCLEAR POWER STATION UNIT NOS. 2/3
QUAD CITIES NUCLEAR POWER STATION UNIT NOS. 1/2

DISTRIBUTION

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PWO' Connor
MGrotenhuis
JGuibert
OELD - Swanson/Mulkey
OI&E (3)
DEisenhut
TBAbennathy

We have completed our review of the information which you submitted on August 2, September 27 and November 5, 1976 in response to our letters of May 20 and August 23, 1976 regarding the potential for Low Pressure Coolant Injection (LPCI) pump damage at your facilities due to pump operation in excess of design flow (runout) following a postulated loss of coolant accident (LOCA).

As indicated in the enclosed evaluation, we have concluded that your facilities design provides sufficient safety margin to preclude LPCI pump damage following a LOCA due to either pump cavitation or pump motor overload. In addition, we have concluded that the short term load limits of your emergency diesel generators would not be exceeded during potential LPCI pump runout conditions.

Sincerely,

Original Signed by:
Dennis L. Ziemann
Dennis L. Ziemann, Chief
Operating Reactors Branch #2
Division of Operating Reactors

Enclosure:
Safety Evaluation

cc: See page 2

WMP

PWO

DB

OFFICE	DOR:ORB #2	DOR:ORB #2	DOR:ORB #3	DOR:ORB #2		
SURNAME	RDSilver:ah	PWO' Connor	JGuibert	DLZiemann		
DATE	1/3/77	1/3/77	1/4/77	1/4/77		



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

January 4, 1977

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ATTN: Mr. R. L. Bolger
Assistant Vice President
Post Office Box 767
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RE: DRESDEN NUCLEAR POWER STATION UNIT NOS. 2/3
QUAD CITIES NUCLEAR POWER STATION UNIT NOS. 1/2

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As indicated in the enclosed evaluation, we have concluded that your facilities design provides sufficient safety margin to preclude LPCI pump damage following a LOCA due to either pump cavitation or pump motor overload. In addition, we have concluded that the short term load limits of your emergency diesel generators would not be exceeded during potential LPCI pump runout conditions.

Sincerely,

A handwritten signature in cursive script that reads "Dennis L. Ziemann".

Dennis L. Ziemann, Chief
Operating Reactors Branch #2
Division of Operating Reactors

Enclosure:
Safety Evaluation

cc: See page 2

Commonwealth Edison Company

- 2 -

January 4, 1977

cc w/enclosure:

Mr. Charles Whitmore
President and Chairman
Iowa-Illinois Gas and
Electric Company
206 East Second Avenue
Davenport, Iowa 52801

Mr. John W. Rowe
Isham, Lincoln & Beale
Counselors at Law
One First National Plaza, 42nd Floor
Chicago, Illinois 60603

Anthony Z. Roisman, Esquire
Roisman, Kessler and Cashdan
1025 15th Street, N. W., 5th Floor
Washington, D. C. 20005

Moline Public Library
504 - 17th Street
Moline, Illinois 61265

Morris Public Library
604 Liberty Street
Morris, Illinois 60451



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

Evaluation of the Potential For Low Pressure Coolant Injection
(LPCI) Pump Damage Due to Operation In Excess of Design
Flow During a Postulated Loss of Coolant Accident (LOCA)

FACILITY NAME: DRESDEN NUCLEAR POWER STATION UNIT NOS. 2/3
QUAD CITIES NUCLEAR POWER STATION UNIT NOS. 1/2

DOCKET NUMBER: 50-237/249/254/265

We have completed our review of the information submitted by Commonwealth Edison Company regarding the potential for LPCI pump damage at Dresden Unit Nos. 2/3 and Quad Cities Unit Nos. 1/2 due to pump runout during short term cooling following a postulated LOCA. Commonwealth Edison Company has provided an analysis and test data which demonstrates that LPCI pump damage due to cavitation would not occur, considering the following conservative assumptions: (1) the LOCA piping break occurs in the recirculation piping at the LPCI injection point (i.e. minimum flow resistance with maximum flow and, therefore, maximum potential for pump cavitation damage); (2) worst single failure (i.e. failure which results in the minimum number of pumps pumping through common piping directly to the break); (3) no credit taken for post-LOCA containment pressurization; (4) highest suppression pool temperature (as predicted 10 minutes after a design basis LOCA); and (5) one pump inoperable at the time of the LOCA. We find this analysis to be acceptable.

We have reviewed the information submitted regarding the maximum LPCI pump motor current which would be experienced during the worst-case LPCI pump runout condition and have concluded that pump motor damage would not result. We have also reviewed the emergency diesel generator loading requirements including the higher motor current requirements resulting from the worst-case LPCI pump runout condition and have concluded that the loadings are within the short term diesel generator load limit.

Date: January 4, 1977