NRC DISTRIBUTION FOR PART 50 DOCKET MATERIAL
(TEMPORARY FORM)

THIS FORM TO BE USED FOR DISTRIBUTION OF MATERIAL IN RESPONSE TO OUR 4-26-75 LTR CONCERNING TRAVERSING INCORE PROBES (TIP)...PER INSTRUCTIONS OBTAINED BY LA R. DIGGS.

CONTROL NO: 5487

FILE:

FROM:	DATE OF DOC	DATE REC'D	LTR	TWX	RPT	OTHER
Iowa Electric Light&Pwe Cedar Rapids, Ia K M Hass	5-6-75	5-19-75	XXX			

TO:	ORIG	CC	OTHER	SENT AEC PDR	SENT LOCAL PDR
Mr Giambusso	none signed			EX	XX

CLASS	UNCLASS	PROP INFO	INPUT	NO CYS REC'D	DOCKET NO:
	XXXXXXXX			1	50-331

DESCRIPTION:

Ltr re our 4-26-75 ltr..... trans the following:

ACKNOWLEDGED

PLANT NAME: Duane Arnold

ENCLOSURES:

Complete TIP Trace sets for the last 3 months & one for October 8, 1974.....

Refer to Folder
(40 cys encl rec'd)

DO NOT REMOVE

FOR ACTION/INFORMATION 5-20-75 ehf

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Misc

- 1 – LOCAL PDR Cedar Rapids, Ia
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- 1 – NSIC (BUCHANAN)
- 1 – ASLB
- 1 – Newton Anderson
- 14 – ACRS HOLDING (SENT)
- 1 – W. PENNINGTON, Rm E-201 GT
- 1 – CONSULTANTS NEWMARK/BLUME/AGBABIAN
- 1 – PDR-SAN/LA/NY
- 1 – BROOKHAVEN NAT LAB
- 1 – G. ULRIKSON, ORNL
- 1 – AGMED (RUTH GUSSMAN) Rm B-127 GT
- 1 – J. D. RUNKLES, Rm E-201 GT

REGULATORY DOCKET FILE COPY

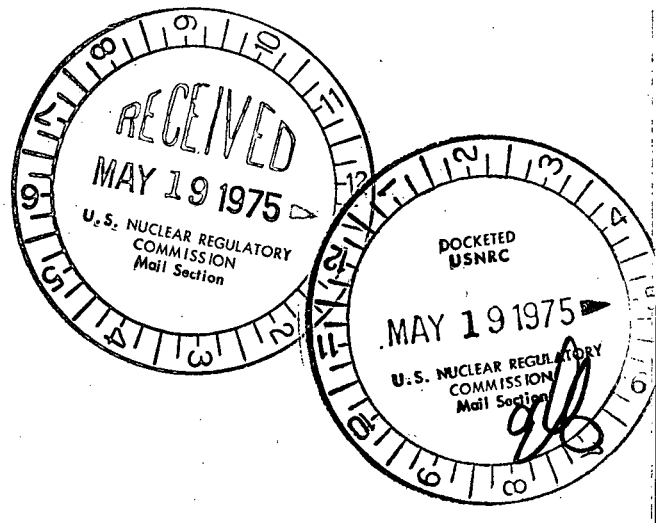
IOWA ELECTRIC LIGHT AND POWER COMPANY

General Office

CEDAR RAPIDS, IOWA

DUANE ARNOLD ENERGY CENTER
PALO, IOWA
MAY 6, 1975
DAEC-75-188

50-331



Mr. Angelo Giambusso, Director
Division of Reactor Licensing
U. S. Nuclear Regulatory Commission
1717 H Street N. W.
Washington, D. C. 20545

Dear Mr. Giambusso:

In response to Mr. B. C. Rusche's 4/26/75 letter to Mr. Duane Arnold, complete TIP Trace sets for the last three (3) months and a TIP set from October 8, 1974 have been closely examined for abnormalities. These traces are summarized below and attached to this report.

Date of Trace Set	Core Power (MWt)	Core Flow (Mlb/hr)
10/8/74	1584	48.75
2/4/75	1178	32.36
4/3/75, 1000 Hours	1584	48.41
4/3/75, 1600 Hours	1588	49.01
4/7/75	1407	41.53

DAEC uses 3 TIP machines to monitor 20 core locations. Traces from all 3 machines of core location 24-25 were compared to determine if any TIP channel exhibited more noise than another. On all TIP trace sets the three TIP channels showed similar response in the common core location. Thus, no differences in traces can be readily attributed to a difference in the response of the various TIP machine electronics.

All diagonally symmetric TIP locations for each set of traces were compared to spot possible asymmetric axial power distributions. Figure 1 indicates lines of symmetry. No asymmetric conditions could be found which would indicate any abnormal incore condition.

Except for the TIP trace set of 2/4/75 taken at low core flow, the traces of the last 3 months reveal three locations that have a higher than average level of noise. Locations 16-09, 32-17, and 24-17 were the most noisy locations.

5487

Of these three, 16-09 is the only location where noise is not clearly less than the reporting criteria established by the 4/26/75 letter from USNRC to Iowa Electric. Its symmetric location, 08-17, did not exhibit the same noise response. The TIP trace set of 2/4/75 taken at a core flow of 32.36 Mlb/hr indicates a very low level of noise.

A study of location 16-09 using the 4/3/75, 1000 hours TIP trace shows that some 10 inch sections of the traverse do contain signal noise in excess of 6% (noise band width to signal amplitude) at an approximate frequency of 2.5 Hz. An analysis of this location by General Electric has determined, however, that there is no evidence of any channel degradation (See attached letter from W. G. Crockett to D. Moen). General Electric reports that the observed 2.5 Hz noise is characteristically present in BWR instrument strings.

To gain further insight into the vibration problem a high speed recorder was connected to the output of LPRM 16-09 B. The reactor was then operated at various core flows from 19.4 Mlb/hr to 41.5 Mlb/hr in an attempt to determine core flows which gave abnormally high noise signals. There appeared to be no specific flow at which the noise level changes significantly. Instead the noise level gradually increased.

A more quantitative frequency study is due to begin shortly. Besides providing a more descriptive and accurate analysis this exercise will also gather baseline information for any future check on the incores. The results of this analysis will be made available as soon as they are completed.

Sincerely,

Kurt M. Haas
Reactor Engineer
Duane Arnold Energy Center

APPROVED BY: _____
Chief Engineer

APPROVED BY: _____
Reactor & Plant Performance Engineer

APPROVED BY: _____
Charles W. Sandford
Executive Vice President

attachment

KMR/mg

cc: D. A. Arnold
C. W. Sandford
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D. A. Moen
J. R. Bull
File, J-40b
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