MEMO ROUTE SLIP
Form AEC-93 (Rev. May 14, 1947) [redacted]M 0240

See me about this.	For [redacted]urrence.	For action.
Note and return.	For [redacted]ature.	For information.

TO (Name and unit)	INITIALS / DATE	REMARKS
RO Chief, FS&EB RO:HQ (4) Licensing (4) DR Central Files Region I		IOWA ELECTRIC LIGHT & POWER COMPANY Docket 50-331
Region II PDR Local PDR NSIC DTIE		
OGC, Beth, P-506A		
FROM (Name and unit) W. E. Vetter RO:III		Attached is applicant's reply dtd 8-15-73 to RO letter dtd 7-26-73 re possible inverted tubes in control blades.
PHONE NO.	DATE 8-28-73	

USE OTHER SIDE FOR ADDITIONAL REMARKS

GPO : 1971 O - 445-469

LB

IOWA ELECTRIC LIGHT AND POWER COMPANY

General Office

CEDAR RAPIDS, IOWA

August 15, 1973
IE-73-1208

C. W. SANDFORD
VICE PRESIDENT

Mr. Boyce Grier
Regional Director
U. S. Atomic Energy Commission
Directorate of Regulatory Operations
Region III
799 Roosevelt Road
Glen Ellyn, Illinois 60137

Re: Duane Arnold Energy Center
Subject: Control Rod Blade Absorber Tubes
File: A-110, Q-614

Dear Mr. Grier:

This is in response to your letter of July 26, 1973 concerning control blades containing possible inverted B_4C tubes in the DAEC reactor. The necessary inspection has been completed and preliminary results phoned to Mr. Hayes of your office on August 7, 1973.

Prior to receipt of your letter, plans had been made to remove the control blades from the vessel to examine them to verify the orientation of the B_4C tubes. A procedure covering the examination, cleaning and reinstallation of the blades was prepared by General Electric and approved by Iowa Electric personnel on August 3, 1973. All blades received a preliminary check on August 4 and 5, 1973 using a magnetic indicator on the top (lifting handle) end. Twenty-three (23) blades were rejected as a result of this review.

The remaining blades were X-rayed at the velocity limiter end to verify the presence of steel wool at that location. Thirteen (13) blades were rejected as a result of this examination. The X-rays revealed only individual B_4C tubes inverted, not entire sheaths.

The remaining blades underwent a detailed visual examination before cleaning and reinstallation in the reactor. Nine (9) blades were rejected on visual inspection for minor abnormalities, including bent lifting bails, rough machining and a missing tack weld.

The remaining forty-four (44) blades were reinstalled in the vessel for use. The forty-five (45) rejected blades were returned to General Electric at Wilmington, North Carolina.

Forty-five (45) replacement blades were supplied by General Electric. The X-rays of the velocity limiter end of the B_4C rods in the replacement blades furnished with these blades were reviewed and accepted by Iowa Electric personnel before their installation.

The X-ray examination method provides an extremely reliable method of determining B_4C rod orientation. Acceptance or rejection is determined by the presence or absence of identifiable characteristics which demonstrate clearly the orientation of the B_4C rods.

Documentation of the examination is on site for your review. If you have any questions, please do not hesitate to call.

Very truly yours,

C. W. Sandford

C. W. Sandford
Vice President

CWS:ar

c.c. Mr. L. D. Root
Mr. G. A. Cook
Mr. C. S. Darrow
Mr. J. H. M. Miller
Mr. J. R. Newman
Mr. M. R. Muir
Mr. M. J. Jacobson