

MEMO ROUTE SLIP		See me about this.	For concurrence.	For action.
Form AEC-93 (Rev. May 14, 1947) M 0240		Note and return.	For signature.	For information.
TO (Name and unit) RO Chief, FS&EB RO:HQ (4) Licensing (4) <u>DR Central Files</u> Region I	INITIALS	REMARKS IOWA ELECTRIC LIGHT & POWER COMPANY Docket 50-331		
	DATE			
TO (Name and unit) Region II PDR Local PDR NSIC DTIE	INITIALS	REMARKS		
	DATE			
TO (Name and unit) OGC, Beth, P-506A	INITIALS	REMARKS		
	DATE			
FROM (Name and unit) W. E. Vetter RO:III	REMARKS 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.

AUG 20 1973

Mr. Boyce Grier

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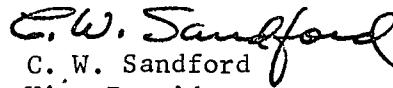
August 15, 1973

Forty-five (45) replacement blades were supplied by General Electric. The X-rays of the velocity limiter end of the B<sub>4</sub>C 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<sub>4</sub>C rod orientation. Acceptance or rejection is determined by the presence or absence of identifiable characteristics which demonstrate clearly the orientation of the B<sub>4</sub>C 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  
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