

JAN 17 1973

Iowa Electric Light & Power Company
ATTN: C. W. Sandford
Vice President
Security Building
P. O. Box 351
Cedar Rapids, Iowa 52406

Docket No. 50-331
Ref. CDR-70

Gentlemen:

Thank you for your report dated December 26, 1972, concerning the oversized bores for the incore housing in the bottom of the reactor pressure vessel in your Duane Arnold facility. Your corrective action and the documentation relative thereto will be reviewed during our continuing inspection program. Should additional information be required relating to this problem, you will be contacted through our office in Glen Ellyn, Illinois.

Your cooperation concerning this matter is appreciated.

Yours truly,

F. E. Kruesi, Director
Regulatory Operations

bcc:

L. Rogers, RS
P.A. Morris, RO
H.D. Thornburg, RO
R.H. Engelken, RO
R.S. Boyd, L
R.C. DeYoung, L
F. Schroeder, L
J.G. Keppler, RO
G.W. Reinmuth, RO
W.R. Butler, L

B.H. Grier, RO:III
M. Steele, RO
L. Reeder, RO
DR Central Files
DR Reading Files
PDR
Local PDR
NSIC
DTIE, OR

#21765.

OFFICE	RO <i>FEK</i>	<i>JS</i>	<i>JSK for RHE</i>	<i>FEK</i>		
SURNAME	DEWhitesell/ x-7451 mib	JBHenderson	RHEngelken	FEKruesi		<i>CB</i>
DATE	1/16/73	1/16/73	1/16/73	1/17/73		

NS/C

IOWA ELECTRIC LIGHT AND POWER COMPANY

General Office

CEDAR RAPIDS, IOWA

December 26, 1972

IE-72-710

C. W. SANDFORD
VICE PRESIDENT

Mr. Frank E. Kruesi
Directorate of Regulatory Operations
U. S. Atomic Energy Commission
Washington, D. C. 20545

50-331

Re: Duane Arnold Energy Center #1
Subject: Oversize Incore Housing Bores
File: Q-606

Dear Mr. Kruesi:

This report is to provide additional information on the oversize incore housing bore problem as reported to your Region III office on October 18, 1972.

Due to machining variation, 15 of the 30 holes for the incore housing in the bottom of the RPV were bored oversize by as much as 0.028 inches. The vessel fabricator documented that 17 bores were apparently oversize. After reviewing the data, the NSSS supplier established that actually 15 bores were oversize while 2 were acceptable as they were. The NSSS supplier's engineers approved the deviation on the basis of 15 oversize bores.

Such oversize bores are not considered unusual by the RPV fabricator or the NSSS supplier. To provide for such deviations, the NSSS supplier maintains a supply of housings to properly fit a range of bore diameters. The proposed resolution of the oversize bores was for the NSSS supplier to furnish oversize housings to maintain the required fit tolerance of 0.020 inches between housing O.D. and boring I.D..

The NSSS supplier's reactor vessel design engineer prepared the Field Deviation Instruction to supply the oversize housing, but the NSSS supplier's equipment engineer failed to implement by requisitioning the required oversize housings and sending the FDI to the field. Therefore, the oversize housings were not delivered to the field. Without implementation of the FDI, the NSSS supplier's field personnel responsible for supervision of the RPV internals was not aware of the discrepancy.

During the initial stages of installation of housings the NSSS supplier field personnel inquired of their home office the content of an FDI for incore housings shown on a monthly listing of FDI's. FDI's are serialized and the list including subjects issued monthly. In this manner, the field personnel were informed of the 15 discrepant bores. By this time, six housings had been installed in the discrepant bores.

Following disclosure of the discrepancy, all bores and cores were measured and documented to verify that the tolerance requirements had been met.

The O.D. of the six installed housings was measured to determine if their fit was within the 0.020 inch tolerance. Using these measurements and the bore diameters furnished by the RPV supplier, NSSS supplier engineers determined that the six housing-bore fit tolerances were within specifications. The NSSS supplier engineers also determined that by selecting housings from those at the site with O.D.'s near the large end of the fabrication tolerance three additional housings could be installed maintaining the fit tolerance. For the remaining 6 bores, oversize housings were needed. These were obtained from the stock maintained by the NSSS supplier.

From its investigation, Iowa Electric has concluded that the failure of the NSSS supplier equipment engineer to implement the FDI was an isolated oversight in a system which has otherwise been most responsive to the needs of the project.

NSSS supplier field personnel are maintaining a close check on the FDI list to be aware of the special requirement prior to equipment installation. Iowa Electric is also conducting a review of the outstanding FDI list.

The safety implication of the occurrence can only be predicted by a seismic reanalysis of the vessel. Inasmuch as the tolerances between the bores and housings have been maintained within the original limits, the as assembled condition precludes any safety implications. Therefore, we have considered it unnecessary to perform a seismic re-analysis for the hypothetical case of excessive tolerances.

If you have any further questions, do not hesitate to contact us.

Very truly yours,


C. W. Sandford
Vice President

GAC:CWS:hh

cc: Mr. Boyce Grier
Mr. Larry Root
Mr. Jack Newman
File