

## ARGONNE NATIONAL LABORATORY

9700 SOUTH CASS AVENUE, ARGONNE, ILLINOIS 60439

Telephone 312/972-5137

October 7, 1962

Mr. Roger Lankabury  
 U.S. Nuclear Regulatory Commission  
 799 Roosevelt Road  
 Glen Ellyn, IL 60137

SUBJECT: Hardness Test on Bolts and Nuts

Dear Roger:

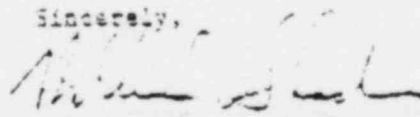
Hardness tests were performed on the three bolts (1/2, 3/8, 1/4-in.) and the corresponding nuts to see if they conformed to the appropriate ASTM specification (A307 for the bolts, A563 for the nuts). The results of the tests are summarized below:

Our sample's	Specimen	Hardness	
		Vickers	Brinell
51 52	No. 22 3/8-in. Bolt	169	152
	Nut	193	182
53 54	No. 23 1/4-in. Bolt	211	201
	Nut	190	181
55 56	No. 24 1/2-in. Bolt	187	178
	Nut	222	211

The tests were actually performed using a Vickers 163° pyramid indenter with a loading force of 30 kg. The correspondence between the Vickers and Brinell hardness follows the correlation given in the ASM Metals Handbook, Vol. 1, p. 1234.

The specimens do meet the required specifications, and in most cases are roughly in the middle of the range. The well known correspondence between hardness and flow indicate that they almost certainly meet the tensile requirements, but we have not checked them directly.

Sincerely,



William G. Shack  
 Materials Science & Technology Division

WJS:dkm

OCT 12 1962

U.S. DEPARTMENT OF ENERGY

THE UNIVERSITY OF CHICAGO

ARGONNE UNIVERSITIES ASSOCIATION

PDR



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

DEC 6 1982

NOTE TO: File (50-373)

FROM: Anthony Bournia, Project Manager  
Licensing Branch No. 2, DL

SUBJECT: PROCESS DOCUMENT FROM C. F. BRAUN

Please process this document thru DCS. This is additional information to be included in the C. F. Braun HVAC Independent Review Report for La Salle Unit 1.

*Anthony Bournia*

Anthony Bournia, Project Manager  
Licensing Branch No. 2, DL

cc: Jeff Bartlett

DEC 6 1982

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(S)

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Licensing Branch No. 2, DL

cc: Jeff Bartlett

OFFICE	DL:LB#2/PM						
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DATE	12/6/82						