



Consumers
Power
Company

General Offices: 212 West Michigan Avenue, Jackson, Michigan 49201 • Area Code 517 788-0550

January 10, 1969

Dr. P. A. Morris, Director
Division of Reactor Licensing
United States Atomic Energy Commission
Washington, D. C. 20545

Re: Docket 50-155
DPR-6 ZEK

Dear Dr. Morris:

Attention: Mr. D. J. Skovholt

As a follow-up to conversations with your staff, we are sending you information on the mechanical design and manufacturing changes of a single Reload "E" fuel bundle (designated W-1) which will be inserted into the Big Rock Point reactor during our next refueling outage in early 1969. The fuel bundle is being fabricated by a vendor other than our previous fuel supplier. However, it has been designed and manufactured to the same criteria as the Reload "E" fuel and as such does not, in the opinion of Consumers Power Company, involve an unreviewed safety question or a change to the Technical Specifications of License DPR-6, Docket No 50-155, issued to Consumers Power Company on May 1, 1964, for the Big Rock Point Nuclear Plant.

Discussion

The mechanical design (see drawing attached) and fabrication of this Reload "E" Fuel Bundle W-1 was provided by Canadian Westinghouse and, hence, is slightly different from the other Reload "E" bundles in the following respect:

A combination of brazed wear pads and positioning grids at four locations along the bundle length is used to support the fuel rods. This concept has arisen from the basic manufacturing and operating experience of Canadian Westinghouse Company, Ltd. Although it is somewhat different from the United States spring spacer concept, it has proven successful in the Canadian nuclear power program. We expect that it will prove equally successful in our application.

The physics design of Reload Bundle W-1 is exactly equivalent to the other Reload "E" bundles. However, the fuel enrichment



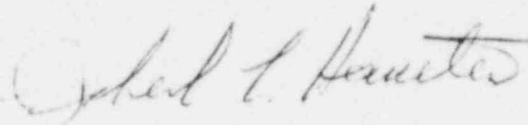
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has been decreased slightly to compensate for a slightly increased fuel rod stack density. The bundle power distribution and all other physics characteristics of Bundle W-1 are exactly the same as the Reload "E" fuel; and the flow analysis shows a slight increase in coolant flow arising from improved geometry characteristics of the W-1 bundle.

Hazards Considerations

All present limits on control rod worth, heat flux, center melting, fuel temperature and critical heat flux ratio will be observed, and operation of the reactor will be within these limits. In the R&D Program at Big Rock Point, it has been shown that major differences in mechanical design between fuel bundles have little or no effect with respect to hazards considerations. The above-detailed design and manufacturing changes have not altered the results of the hazards analyses. Based upon this, we have concluded that the use of Reload Bundle W-1 in the Big Rock Point Nuclear Plant does not present a change in the hazards considerations described or implicit in the Final Hazards Summary Report.

Yours very truly,

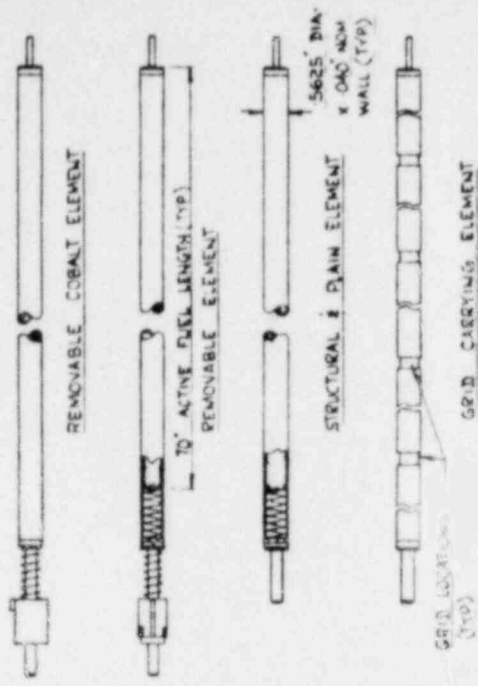
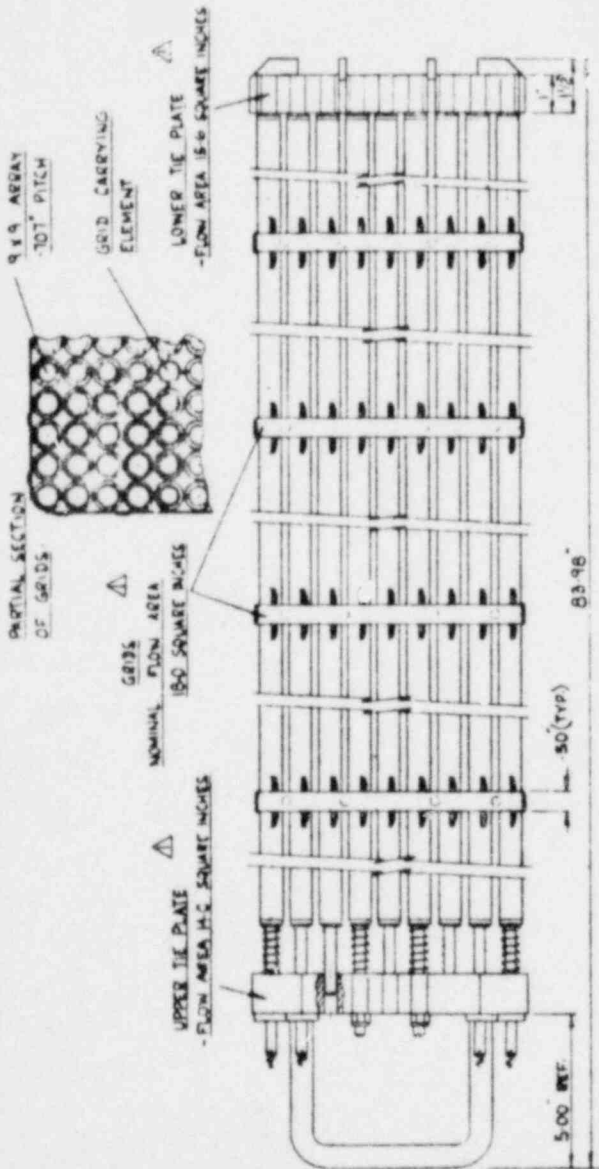


Robert L. Haueter
Assistant Electric Production
Superintendent - Nuclear

GJW/dmb
Attach

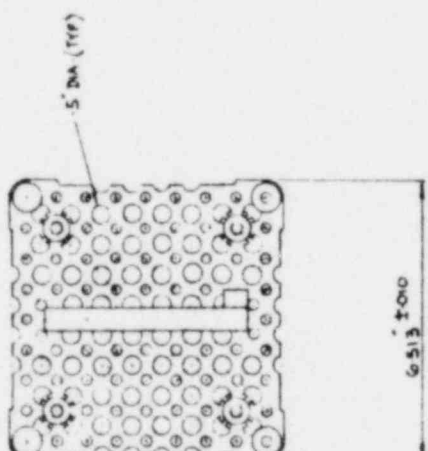
REPORT ALL ERRORS TO DRAWING OFFICE

ITEM No.	QTY.	DESCRIPTION	MARKING
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NOTE: FLOW AREAS BASED ON A NOMINAL CHANNEL DIMENSION OF 6.543 INCHES.

MATERIAL	
SHEATHING	ZIRC-4
GRIDS	ST ST-1
TIE PLATES	ST ST-1
FUEL	UO ₂



COBALT FLOW NOTES ADDED	5.13	RM
CHANGES	5.13	RM
 Canadian Westinghouse Company Limited ATOMIC FUEL DEPARTMENT PORT HOPE, ONTARIO		
BIG ROCK POINT FUEL BUNDLE - W-1		
SHEET 1 OF 1 SHEETS	BASIC	REV 10
	B	3524
DRAWING AND PART NUMBER		CONF

IF IN DOUBT, ASK

POOR ORIGINAL

1-10-69
58-109

FROM: Consumers Power Company
 Jackson, Michigan
 Robert L. Haueter

DATE OF DOCUMENT:

1-10-69

DATE RECEIVED

1-13-69

NO.:

95

LTR.

MEMO:

REPORT:

OTHER:

X

TO:

Morris

ORIG.:

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CC:

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OTHER:

ACTION NECESSARY

CONCURRENCE

DATE ANSWERED:

NO ACTION NECESSARY

COMMENT

BY:

CLASSIF.:

U

POST OFFICE

REG. NO.:

50-155

DESCRIPTION: (Must Be Unclassified)

Ltr furnishing info on the mechanical design & rfiging changes of a single Reload "E" fuel bundle (designate W-1) which will be inserted in Big Rock during

ENCLOSURES: next refueling outage early 1969

(3 cpy)

Dwging 3-444 844. Big Rock Point
 Fuel Bundle W-1

FILE CODE:

REFERRED TO

DATE

RECEIVED BY

DATE

Pleury

1-13-69

W/9 extra cys

INFO CYS TO:

H. Price & Staff
 Boyd

Dube/Lerone

D. Gibson

SK - 10-17

REMARKS:

DIST: 1- Suppl file
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