

1965 MAR 8

CONSUMERS POWER COMPANY  
PARNELL ROAD BUILDING  
JACKSON, MICHIGAN  
MARCH 8, 1965

U.S. ATOMIC ENERGY COMM.  
TWX UNIT

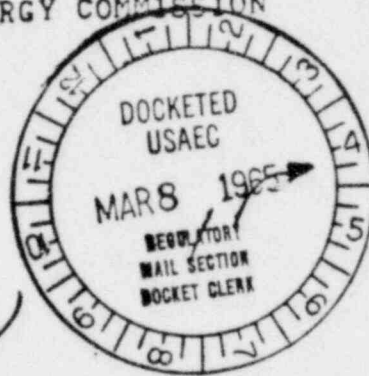
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TO - DR. R. L. DOAN, DIRECTOR  
DIVISION OF REACTOR LICENSING  
UNITED STATES ATOMIC ENERGY COMMISSION

ATTN - MR. ROGER S. BOYD

DOCKET 50-155

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U.S. ATOMIC ENERGY COMM.  
REGULATORY  
MAIL SECTION

AS A RESULT OF RECENT DISCUSSIONS WITH YOUR STAFF REGARDING OUR REQUEST FOR CHANGES TO THE BIG ROCK POINT TECHNICAL SPECIFICATIONS, DATED JANUARY 13, 1965 AND FURTHER SUPPORTING INFORMATION TRANSMITTED BY TWX ON MARCH 2, 1965, THE FOLLOWING ADDITIONAL INFORMATION IS SUBMITTED -

1. THE STARTUP ACCIDENT ASSUMPTIONS USED IN THE FHSR ARE CONSERVATIVE, EVEN FOR THE PROPOSED LOW SOURCE LEVEL STARTUP. CONDITIONS FOR THREE CASES - FHSR ACCIDENT ANALYSIS, PREVIOUS 84 BUNDLE CORE OPERATION AND PROPOSED 82 BUNDLE CORE OPERATION WITH LOW SOURCE LEVEL ARE AS FOLLOWS -

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FHSR - CORE POWER IS ASSUMED TO BE ELEVEN DECADES BELOW RATED WITH ALL RODS IN. WORST CASE OF ONE ROD FULL OUT GIVES TEN DECADES BELOW RATED. CRITICALITY ASSUMED DURING CONTINUOUS WITHDRAWAL OF WORST ROD WHICH IS 3.9 PERCENT DELTA K.

PREVIOUS 84 BUNDLE CORE - FULLY SHUTDOWN CORE POWER IS FIVE TIMES TEN TO THE MINUS NINTH OF RATED. WORST CASE OF ONE ROD FULL OUT GIVES CORE POWER OF TWO TIMES TEN TO THE MINUS EIGHTH AND K EFF OF 0.98. CRITICALITY ASSUMED DURING CONTINUOUS WITHDRAWAL OF WORST ROD WHICH IS 3.4 PERCENT DELTA K.

82 BUNDLE CORE, LOW SOURCE LEVEL - FULLY SHUTDOWN CORE POWER LEVEL IS ONE TIMES TEN TO THE MINUS NINTH OF RATED. WORST CASE OF ONE ROD FULL OUT GIVES CORE POWER OF FOUR TIMES TEN TO THE MINUS NINTH AND K EFF OF 0.99. CRITICALITY ASSUMED DURING CONTINUOUS WITHDRAWAL OF WORST ROD WHICH IS 3.4 PERCENT DELTA K.

FROM THE ABOVE IT CAN BE SEEN THAT PLANNED OPERATING CONDITIONS ARE WELL WITHIN THE ASSUMPTIONS USED IN THE FHSR AND THAT A STARTUP ACCIDENT WOULD BE SIGNIFICANTLY LESS SEVERE THAN THAT SHOWN BY THE FHSR ANALYSIS.

2. THE SHUTDOWN K OF 0.951 IS THE LATEST CALCULATED K FOR THE PLANNED 82 BUNDLE CORE.

3. THE ZIRCALOY TWO CONTENT OF PLANNED CORE WITH EIGHT ZIRCALOY BUNDLES AND 88 ZIRCALOY CHANNELS IS 5236 POUNDS WITH 85 PERCENT CONTAINED IN CHANNELS.

THE ZIRCALOY TWO CONTENT OF FUTURE CORE OF 84 ZIRCALOY BUNDLES AND 88 ZIRCALOY CHANNELS IS 12,000 POUNDS WITH 35 PERCENT CONTAINED IN CHANNELS.

ROBERT L. MAUETER  
ASST ELECTRIC PROD. SUPT - NUCLEAR

END WL

REC ONE TKS DA

**TWX INCOMING**

U.S. ATOMIC ENERGY  
COMMISSION  
WASHINGTON, D.C.

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MAIL SERVICE

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