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TWX INCOMING

RECEIVED DOCKET NO. 70-820

1964 JUN 30 PM 3 22

THIS IS UNITED NUCLEAR CALLING JUNE 30, 1964  
U.S. ATOMIC ENERGY COMM.  
REGULATORY  
MAIL SECTION

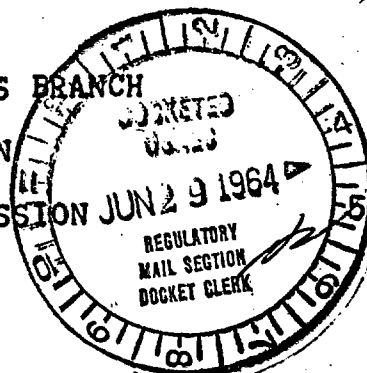
MR. DONALD A. NUSSBAUMER, CHIEF

SOURCE & SPECIAL NUCLEAR MATERIALS BRANCH

DIVISION OF LICENSING & REGULATION

UNITED STATES ATOMIC ENERGY COMMISSION JUN 29 1964

WASHINGTON 25, D. C.



U.S. ATOMIC ENERGY COMM.  
TWX UNIT

1964 JUN 30 PM 1 47

RE AMENDMENT I TO SPECIAL NUCLEAR MATERIAL LICENSE NO. SNM-777

IN CLARIFICATION OF MY WIRE OF JUNE 25, 1964, THIS AMENDMENT IS SUBMITTED TO PROVIDE AN ALTERNATE SHIPPING CONTAINER TO THE ONE APPROVED IN SNM-777, 702.2 BE PERMIT 1483 FOR SHIPPING WATER INSOLUBLE URANIUM COMPOUNDS UP TO FULLY ENRICHED URANIUM CONTAINING A MAXIMUM BULK DENSITY OF 3.2 GRAMS URANIUM PER CUBIC CENTIMETER.

THE PROPOSED ALTERNATE CONTAINER WILL BE AS SHOWN ON PAGE 40 OF SNM-368, BUT AS MODIFIED BY MY LETTER TO YOU OF MAY 13, 1964, EXCEPT THAT NO WOODEN END PLUGS WILL BE PROVIDED. THE MULTIPLICATION FACTOR OF A BARE INFINITE CYLINDER LESS THAN FIVE INCHES IN DIAMETER IS 0.58. A SAFE SOLID ANGLE IS 3.2 STERADIANS /FIGURE 6, K-1019, FIFTH REVISION/.

THE SOLID ANGLES FOR ONE, TWO AND THREE TIERS WILL BE CONSIDERED SINCE THE ALTERNATE CONTAINER MAY BE STACKED.

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B-213

THE SOLID ANGLES SUBTENDED AT THE CENTRAL CONTAINER OF A  
PLANAR HEXAGONAL CLOSE PACKED ARRAY OF TWENTY CONTAINERS IS 3.035  
STERADIANS.

ARRAY OF SIXTEEN CONTAINERS IS 3.147 STERADIANS.

THE SOLID ANGLE SUBTENDED AT THE CENTRAL CONTAINER OF A THREE TIERED  
HEXAGONAL CLOSE PLACED ARRAY OF EIGHTEEN CONTAINERS IS 2.793 STERDIANS.

THEREFORE, UP TO TWENTY /20/ CONTAINERS MAY BE SHIPPED IN ONE, TWO OR  
THREE TIERS /MORE THAN THREE TIERS WILL NOT FIT INTO A CONVENTIONAL  
VEHICLE/ WITH THE SOLID ANGLE IN ALL CASES LESS THAN THE 3.2 STERADIANS  
ALLOWED.

HERBERT S. KALISH  
COMMERICAL FUEL MANAGER  
UNITED NUCLEAR CORPORATION  
NEW HAVEN, CONNECTICUT  
TIME 1-45 PM

CORRECTION FIFTH PARG. PLS INSERT

THE SOLID ANGLE SUBTENDED AT THE CENTRAL CONTAINER OF A TWO THXX  
TIERED HEXAGONAL CLOSE PACKED ARRAY OF SIXTEEN CONTAINERS IS 3.147  
STERADIANS.

END PLS ACK

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HEADQUARTERS  
MAIL SERVICE SECTION

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