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UNITED NUCLEAR
CORPORATION

HEMATITE, MISSOURI 63047
TELEPHONE 314-937-2878

July 17, 1964

Mr. Donald Nussbaumer
U. S. Atomic Energy Commission
Division of Licensing and Regulation
St. Elmo and Norfolk Streets
Bethesda, Maryland

SUBJECT: Amendment to SNM-33: Increased Storage Capacity of Building 235

Dear Mr. Nussbaumer:

We have planned additional storage for Building 235 of our plant at Hematite, Missouri. This is to be accomplished by the addition of two concrete walls to the building. Details of this are described in Section 501, revised July 17, 1964 of "General Information Applicable to the Handling of Special Nuclear Material." A copy of this revised section is enclosed.

We are respectfully requesting amendment of SNM-33 to include this increased storage capacity. In that we have an immediate need for this storage, your prompt attention is requested.

Respectfully yours,

L. J. Swallow
Operations Control Manager

LJS:jrt

B-226

500. NON-PROCESSING STORAGE AREAS

501. BUILDING 235 (REFERENCE DRAWING 3712-204)

FIGURES 26 AND 27 SHOW A PLAN VIEW OF THIS BUILDING AND THE ARRANGEMENT OF STORAGE SHELVES. THE CONTAINER SIZES AND QUANTITIES STORED THEREIN ARE THE SAME AS LISTED IN PARAGRAPH 301.4.2. THE TOP TWO SHELVES WILL BE USED FOR THE STORAGE OF THE SHORTER CONTAINERS ONLY SUCH THAT THERE IS AT LEAST EIGHT INCHES SEPARATION TOP TO BOTTOM OF THE CONTAINERS.

IN THAT THE SPACING OF THE CONTAINERS IS AT LEAST EQUAL TO THAT OF THE SHELVES IN THE RED ROOM (PARAGRAPH 301.4.2) FURTHER COMMENT IS UNNECESSARY.

THIS VAULT IS KEPT LOCKED AT ALL TIMES WITH ACCESS ONLY TO THE PROCESS ENGINEER OR FOREMAN.

502. BUILDING 250 (REFERENCE DRAWING 3712-201)

502.1 UF_6 STORAGE (AREA 250-1)

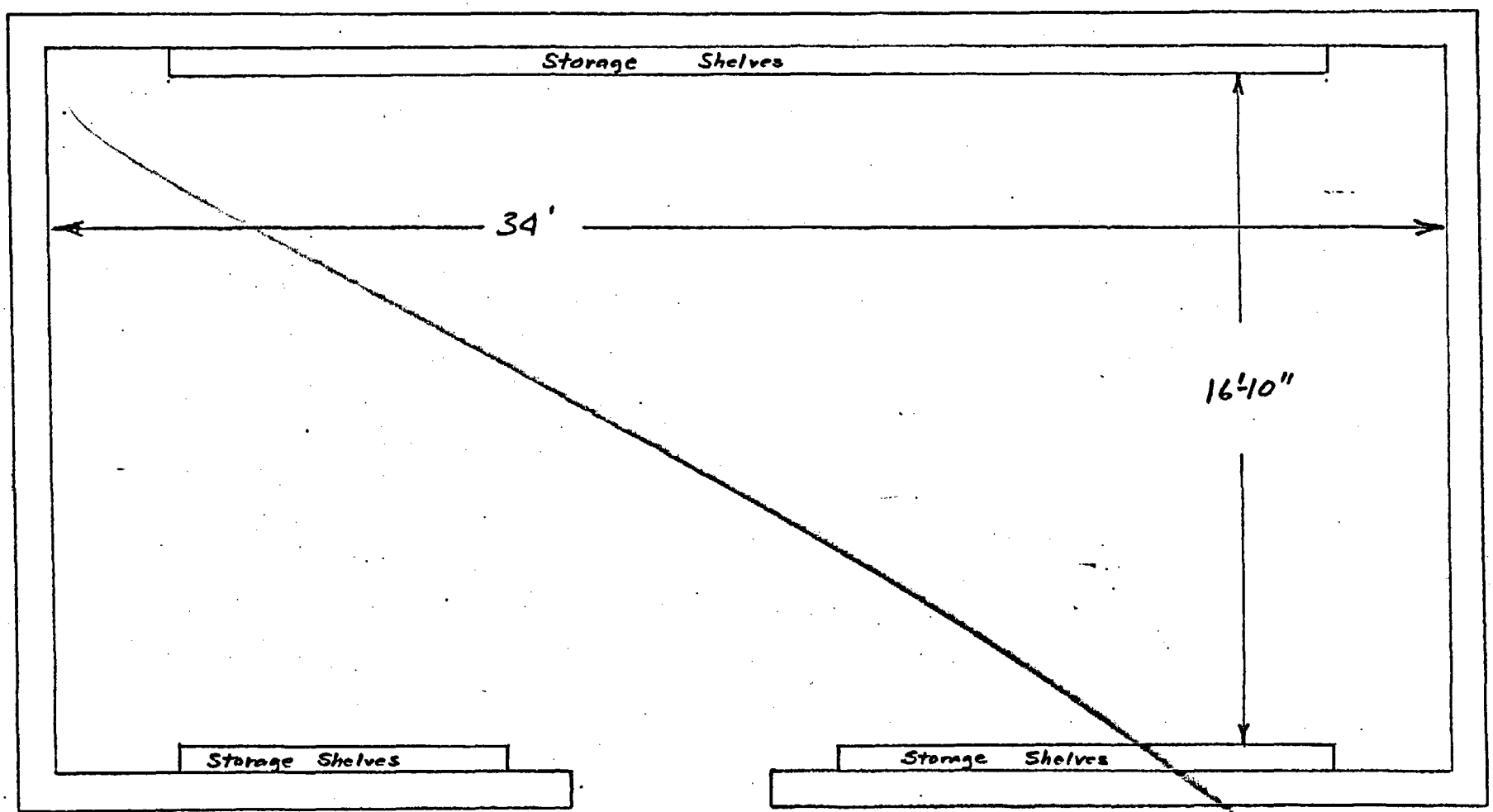
STANDARD AEC FIVE INCH DIAMETER, EIGHT INCH DIAMETER, AND TWELVE INCH DIAMETER UF_6 CYLINDERS ARE STORED IN A SINGLE LAYER IN THIS AREA. THE CYLINDERS REMAIN IN THE SAME BIRDCAGES USED FOR SHIPMENT. AS SUCH, A MAXIMUM OF 84 FIVE INCH CYLINDERS COULD BE STORED. HOWEVER, IN ORDER TO ALLOW ACCESS TO THE AREA, ONLY 60 CYLINDERS WOULD BE PERMITTED. SIMILARLY, 60 OF THE EIGHT INCH AND TWELVE INCH DIAMETER CYLINDERS CAN BE ACCOMODATED. AGAIN, BECAUSE OF ACCESS REQUIREMENTS, ONLY 50 WILL BE ALLOWED.

FROM FIGURE 11, PAGE 164, CRITICALITY CONTROL, 1961 KARLSRUHE SYMPOSIUM, 80 FIVE INCH DIAMETER BY FORTY-FOUR INCH HIGH CYLINDERS WERE CRITICAL AT A SURFACE TO SURFACE SPACING OF ONLY EIGHT INCHES. THE BIRD CAGES FOR THE UF_6 CYLINDERS PROVIDE FOR TWENTY-FOUR INCHES SURFACE TO SURFACE SPACING FOR BOTH THE FIVE INCH AND TWELVE INCH CYLINDERS.

IT IS ALSO NOTED THAT THE REFERENCED DATA WERE OBTAINED WITH OPTIMUMLY MODERATED FULLY ENRICHED SOLUTIONS WHEREAS THE UF_6 IS DRY (UNMODERATED). THEREFORE WITH THE ADDITIONAL SPACING AND LACK OF MODERATION, SAFETY IS ASSURED.

7/17/64

J.R.



BUILDING 235

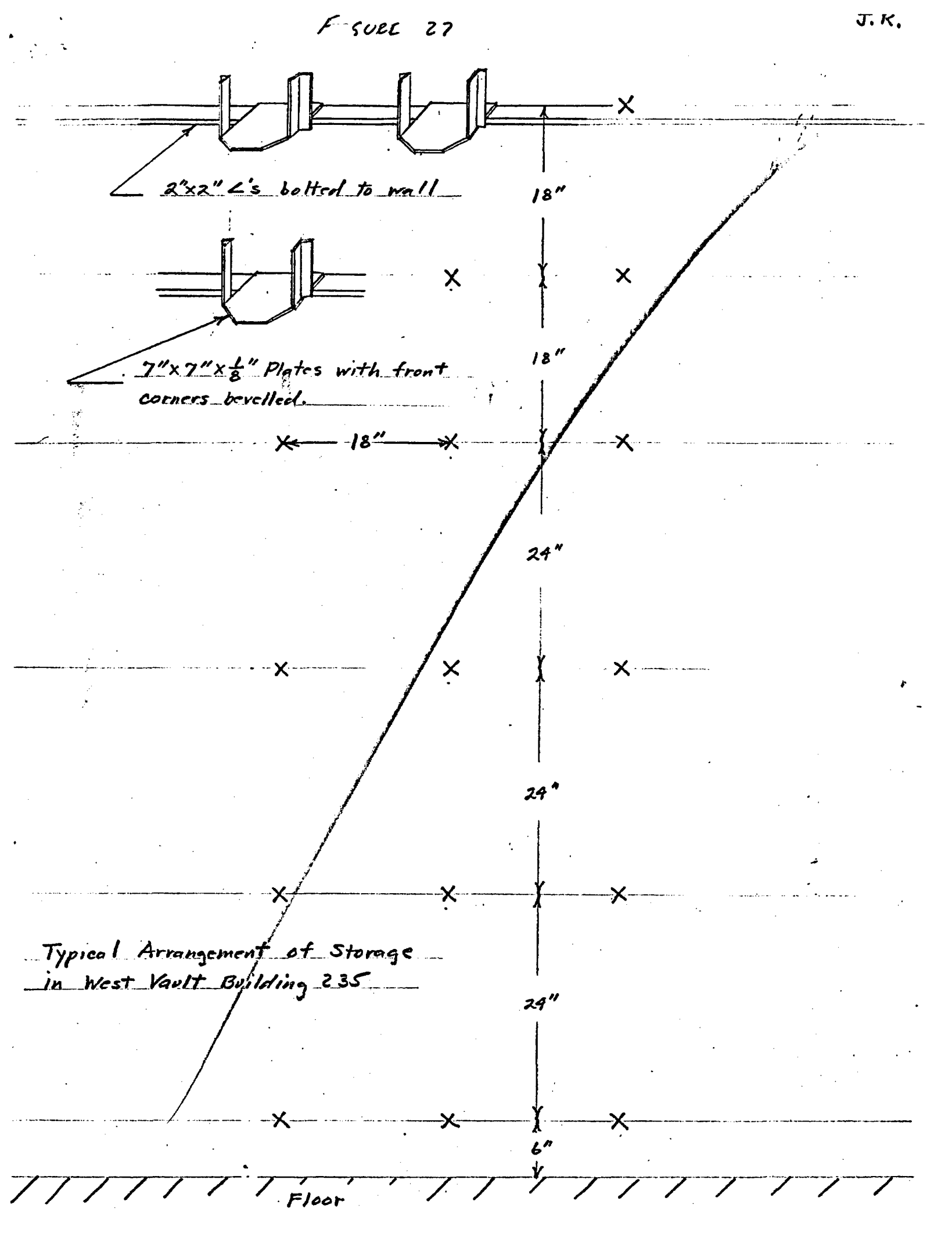
Plan View of West Vault Showing locations of Storage Shelves

7/17/67

FIGURE 26

FIGURE 27

J. K.



Typical Arrangement of Storage in West Vault Building 235