Docket: 70-3
Project: S-6

3 pgs

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We have reviewed the subject application requesting modified procedures for drying highly enriched UF_4 in the drying oven, and the addition of a new filter for UF_4.

We see no objection to approval of the additional layer of UF_4 in the drying oven.

With regard to the new filter, it is of safe diameter and we agree that its location fulfills the solid angle criterion insofar as the other four pieces of equipment are concerned (see Figure 3 attached to July 23 application). However, we are unable to confirm the solid angle of 2.5 steradians, calculated for the new filter, and the solid angle subtended at a muffle box in the aisle outside of the hood. Please ask United Nuclear to furnish dimensioned sketches and a summary of the calculations for these two cases.

Attachment:
Docket 70-36, 1 & 3 of 3

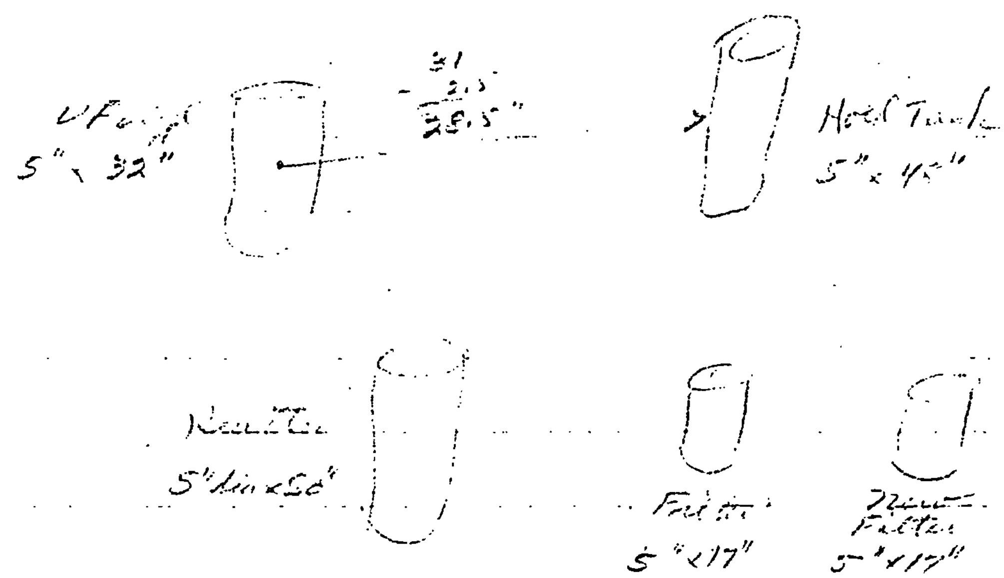
DLR:NS:CEB
CDLuke/vj
11/1/62

B-110

File: 79-36
[illegible] (7/20/62)

Note: Sketch gives 17" ht.

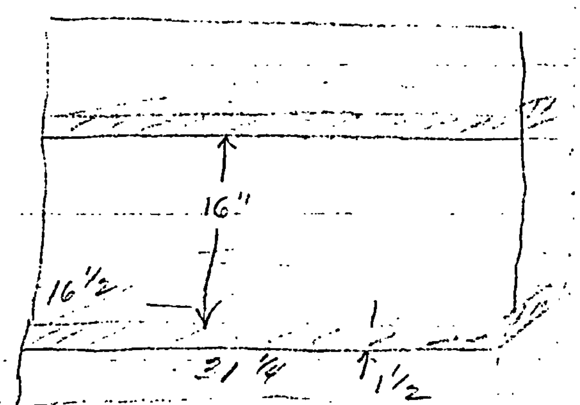
Add a new 5" dia × 13" UF_4 filter



Drying Oven - Dry UF_4 in two layers rather than one

Safe slab thk. of opt mod is 1.5"

Oven now will be mod but not opt

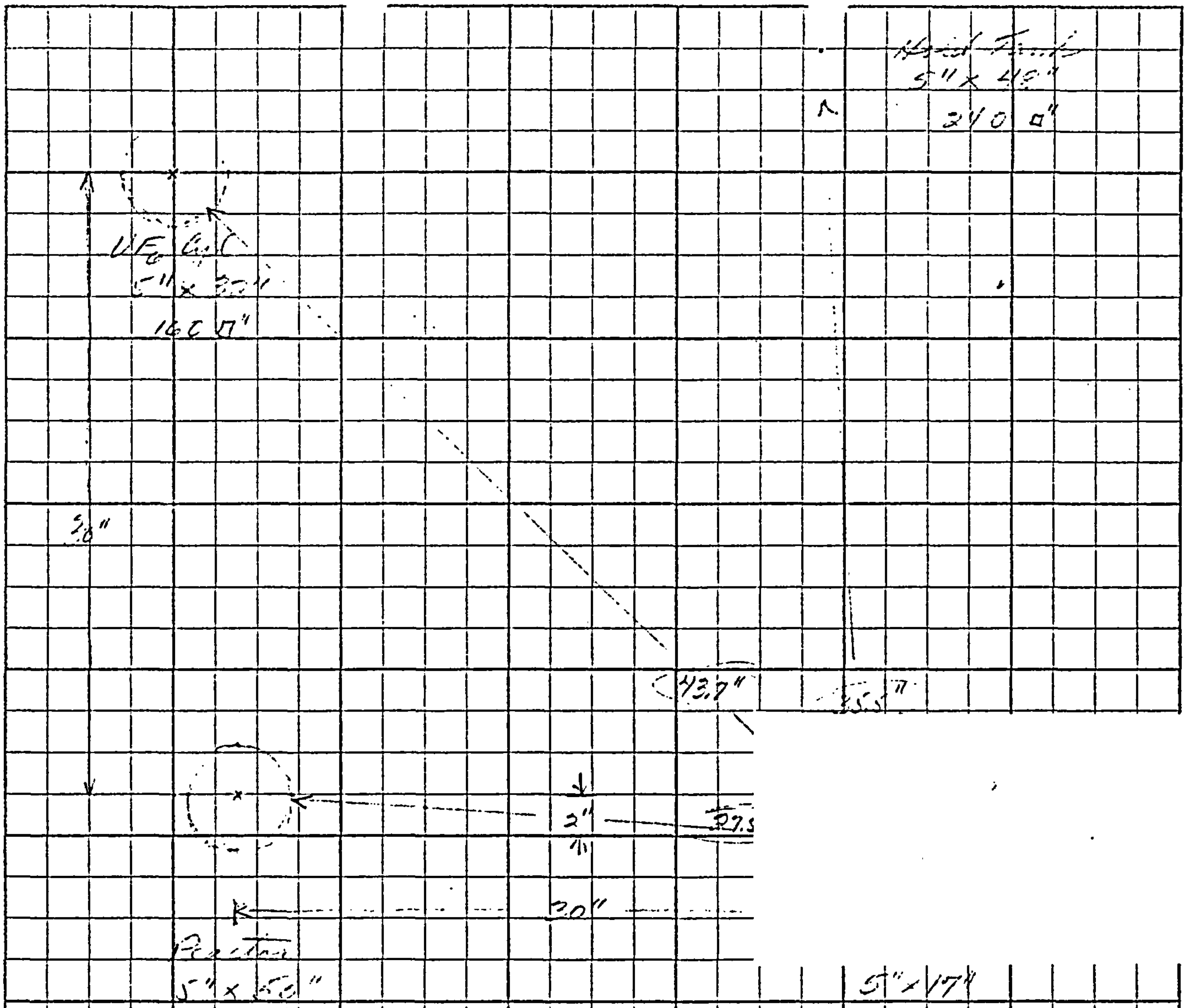


Rough check N.O. (Very Conservative)

$$W = \frac{area}{d^2} = \frac{16.5 \times 31.25}{16^2} = 2.01 \text{ ster.}$$ UN gets 1.3 ster.

Note: K-1019(5) gives 12" spacing OK for two inf 1½" slabs

∴ Oven is OK.



Consider Present Reaction as controlling. Allow 5' dia, so I_c = .58, r_{max} = 3.2

To Reaction	$w = \Sigma m/d^2$	= 250/27.5²	=	.331
To UF6 Cyl	w = "	= 160/43.7² (755)	=	.083
To Hold Tank	w = "	= 240/35.5² (1910)	=	.190
To New Filter	w = "	= 85/24.5² (1260)	=	.144
		(590)		

r_T = .748