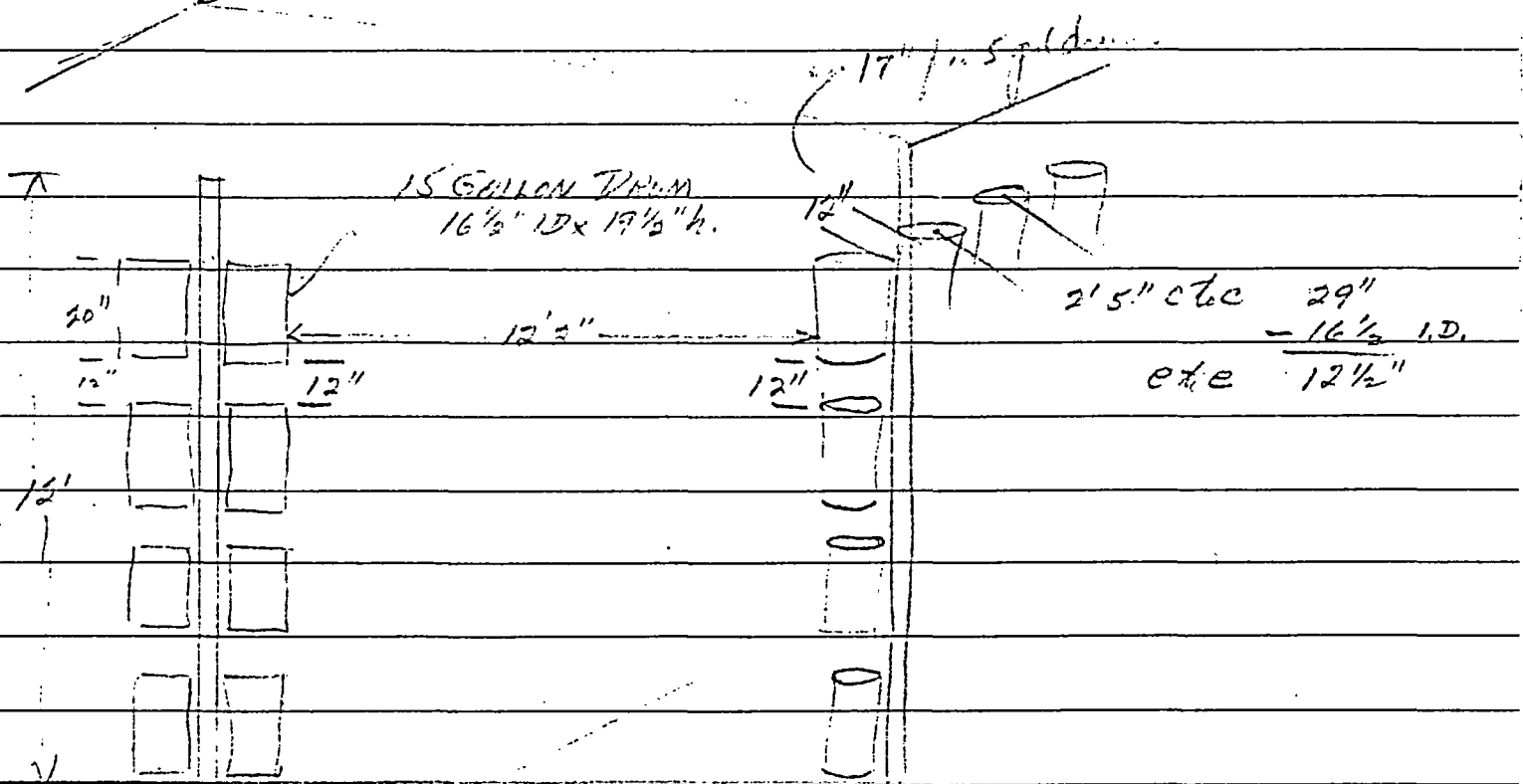
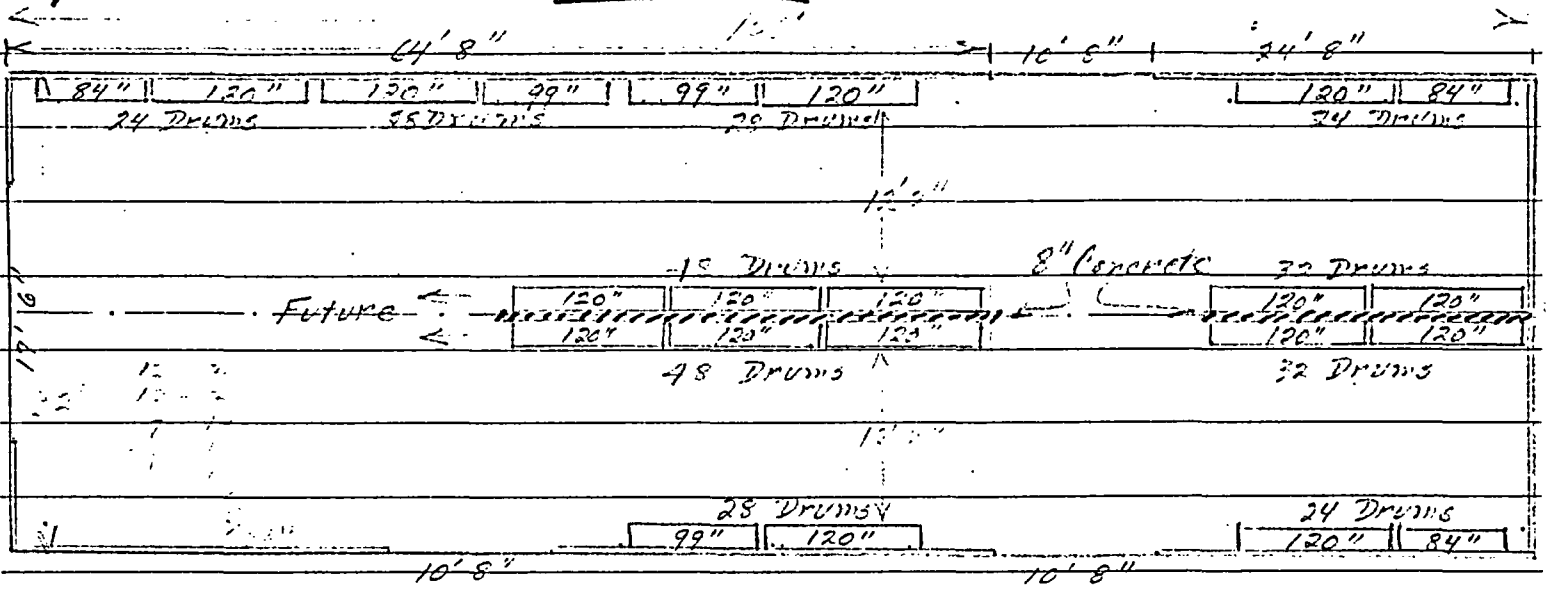


3008
 Mallinckrodt 4/16/60
 Proj 5-8
 D/c 70-36

Request for approval of new storage fac at Hematite
 for material enriched @ 5%



TOTAL DRUMS =

B-56

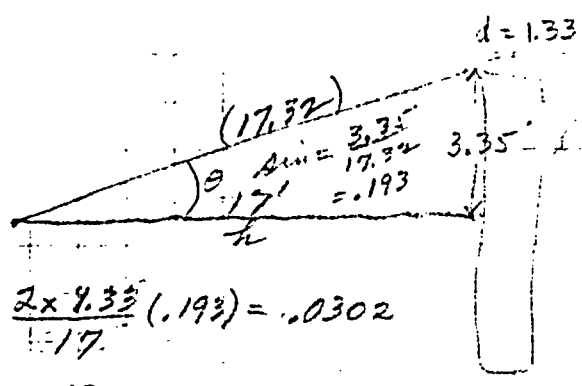
Mat. (2)

Facility will be used for storing 5 and 15 gallon drums

15 gal drums for enr < 3% ^{12.8} 16 1/2" dia x 19 1/4" h. 3.75 gal
 5 gal drums for enr 3-5% ^{10.25} 11 1/4" dia x 13 1/2" h. 1.49 gal

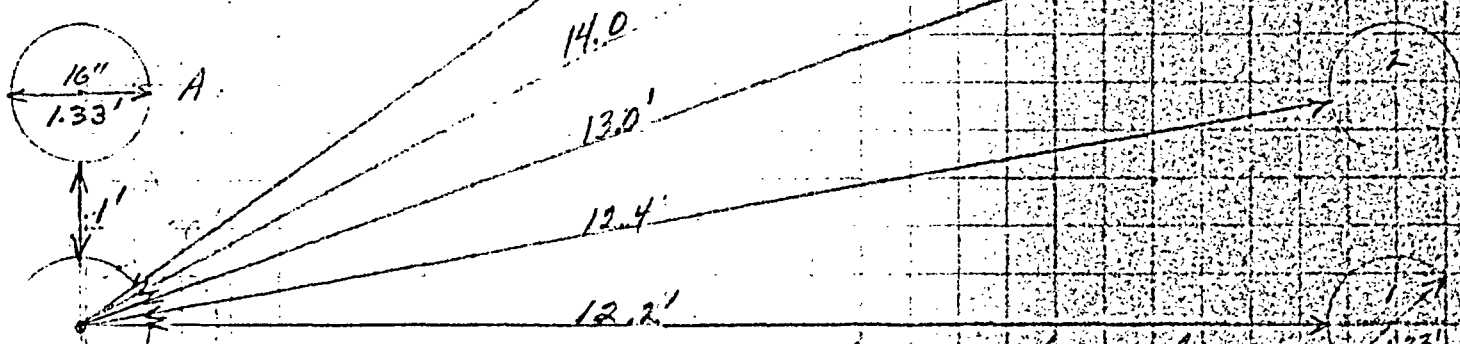
from 1 1/2" diam. 540 lb
 29" x 31 1/2"
 = 6.35 lb

Kg U-235	enr	U-235	U-235	enr	U-235	enr
3.6	1.5	529	600	22.5	567	
2.5	1.75	320	364	13.6	394	
2	2	220	250	9.4	315	
1.2	3	88.2	100	3.75	189	
.8	5 (max proposed)	35.3	40	1.50	126	
.6	10	13.2	15	.562	95	



$$\Omega = \frac{2 \times 4.32 \times (0.193)}{17} = .0302$$

$$\Omega_f = \frac{.0302}{4\pi} = .0024$$



Note - consider L, ht. of column = $4 \times 20'' = 80'' = 6.7'$

$$\epsilon_B = \sigma_A = \frac{\epsilon t \epsilon}{d} = \frac{1'}{1.33} = 0.75$$

$$\lambda_A = \frac{\text{length}}{d} = \frac{6.7}{1.33} = 5.05$$

$$\Omega = .078$$

102 400
 $\sigma = \frac{400}{1664} = .24$
 $\epsilon = \frac{20}{2155} = .00928$
 $1 - \cos \theta = .072$

$\sigma_1 = \sigma_6 = 12.2/1.33 = 9.2$	$\approx .004$ for 1	.004
$\sigma_2 = \sigma_7 = 12.4/1.33 = 9.3$	" for 2	.005
$\sigma_3 = \sigma_8 = 13.0/1.33 = 9.8$	" "	.008
$\sigma_4 = \sigma_9 = 14.0/1.33 = 10.5$	" "	.008
$\sigma_5 = 15.3/1.33 = 11.5$	" "	.008
Next 6 $\approx 17.0/1.33 \approx 12.8$	$\Omega = \approx .002$	$\Omega_{for} = 0.192$

Assume $k = 0.65$, $\Omega_f = 0.20$ Next 8 @ .002 = 0.016

$$\Omega = 2\pi(1 - \cos \theta) = 2\pi(1 - .928) = .452$$

$$\frac{.452}{.904/4\pi} = .072$$

This is a rough check of solid angle using K&J 1309

