UNION CARBIDE CORPORATION

INTERNAL CORRESPONDENCE — My Copy

RECEIVED DEC 17 1972 UCC - CALIFORNIA KING CITY, CA.

MINING AND METALS DIVISION • P. O. BOX 579, NIAGARA FALLS, NEW YORK 14302

To (Name) Mr. P. J. Colpoys
Division UCC-Linde Division
Location 3737 Greenway Plaza Drive
P.O.Box 22127
Houston, Texas 77027

Date December 10, 1971

Originating Dept. Research and Development Department

Answering letter date

Copy to Messrs. D. J. Hansen
J. L. Myers
J. W. Rawlings
L. P. Twichell
R. G. Woolery
R & D File

Subject Weighting Agent from Asbestos Tailings

PLAINTIFF'S EXHIBIT
tabbies
UC-1472

Dear Pat:

The experimental lot of oil well weighting agent material produced from King City plant tailings has been shipped to your attention today.

The material identification is Lot J-1859-25. A total of 180 lb. are in 4 cartons; 3 each of 50 lb. net and 1 each of 30 lb. net weight. This is less than the 200 lb. you requested, but we had some losses in blending and sampling, and it was deemed better to send it to you short weighted than to delay any longer.

I apologize for the delay in getting this sample out. As you know, we did not start the work until October and then we wasted a good deal of time trying to simultaneously develop the process along with the sample production. This was not practical with the small quantity of tailings we had available, less than 2000 lb. Instead, we concentrated on getting out the product by grinding, hydroclone and magnetic separation techniques which are all basically within the King City plant capability. If the material is acceptable to the customer, the process development will have to be handled by additional work.

The material shipped meets or exceeds the required specifications.

Product Specification

	Required	Lot J-1859-25
1. Particle Size	50% -200 Mesh	99% -200 Mesh*
2. Acid Soluble (15% HCl, 150°F., 4 Hr.)	50%	56%
(15% HCl, 4.5% NH_4HF_2 150°F., 4 Hr.)	-	91%
3. Specific Gravity	3.9	3.9
4. Settled Bulk Density 24 Hr.	-	8 ml./g. Solids* 44 Lb./Bbl.

*Determined on repulped sample.

Although Item 4 was not specified, the settled bulk volume was determined since it is critical to the material performance as a packer fluid weighting agent. The procedure was to mechanically disperse 25 grams of material in 1 liter of water and to measure the settling rate:

Time	Pulp Volume (ml.)
0 Min	1000
30 "	600
60 "	470
90 "	385
18 Hr.	220
24 "	200

This product, as does all asbestos products, requires hydraulic shear to fully liberate the fiber and to attain ultimate yield and minimum settled bulk density. Analyses should be run only on material that has been hydraulically dispersed.

It should be possible to recover 15-17% of the plant tailings as weighting agent, equivalent to 4000 to 5000 tons per year. In addition, over half the weight of the tailings is isolated by the first stage cyclone overflow as a fiberous product that should be suitable for use in dry wall cements. Most of the remaining by-product is a low magnetite, fiber free serpentine rock which may be marketable as a filler for dry fertilizers. The overall economics may be better than originally estimated.

Let us know if there is any further information required.

Best regards,

J. E. Skvarla

JES:rvg