Ore Sorters (North America) Inc.

Irongate I, Suite 109 777 South Wadsworth Blvd. Lakewood, Colorado 80226 Telephone (303) 985-0238 TWX 910-937-0374

September 14, 1987

Mr. Rod McElroy
B. C. Research
3650 Wesbrook Mall
Vancouver V6S 2L2
CANADA





Re: PERMROLL® magnetic separation of Wollastonite samples.

Dear Mr. McElroy:

We have completed the magnetic separation studies on five samples provided and the results are presented in this letter. The object of the study was to increase the quality of the material by dry magnetic separation. The scope of the work involved dry magnetic separation of samples at the particle size provided.

The five samples provided were assigned OSNA Sample numbers 87087 A through E and corresponded to the screen size designations 4 X 8, 8 X 18, 18 X 30, 30 X 48 and 48 X 0 respectively. No mineralogy or chemical analysis of the feed material was provided.

He.

Chemical analysis of the final products were not conducted. For chemical evaluation of the results we have shipped the products back via U.P.S. Table 1 summarizes the results of the studies, while details of the magnetic separation test are presented in Exhibit 1.

Table 1
Magnetic separation results

OSNA Sample No.	Material Identification	Test No.	Feed Rate Tons/Hr/Meter	Product	Wt.
87087 A	4 X 8	. 1	5.5	Nonmag 3	84.1
87087 B	8 X 18	1	2.2 6.7	Nonmag 3 Nonmag 3	72 <u>.8*</u> 82.2
87087 C	18 X 30	2	3.8 4.8	Nonmag 3 Nonmag 3	71 <u>.1</u> 76.9
87087 D	30 X 48	2	2.3 4.8	Nonmag 3 Nonmag 3	65. <u>7</u> 81.0
Section of the sectio		2	2.5	Nonmag 3	71.8
87087 E	48 X 0	2	1.9 2.3	Nonmag 3 Nonmag 3	76.9 83.1*

^{*} PERMROLL* equipped with a 100 mm roll. Other tests employed a 71.5 mm roll.

Mr. Rod McElroy September 14, 1987 Page 2

After B.C. Research has had a chance to analyze the final magnetic and nonmagnetic products, we would be interested in the results. Increases in yield can be calculated by combining 3rd magnetic products with 3rd nonmagnetic products, etc. Without the initial mineralogy we did not know how much material needed to be removed from each fraction, and therefore had to guess based on the color of the magnetic fractions.

Past experience in treating wollastonite samples has determined only one or two passes may be required to remove highly magnetic minerals such as garnet and epidote. Success in removing of carbonate minerals will depend on the amount of iron included in the grains.

Treatment costs on PERMROLL® separators has from experience run approximately 1 cent per ton of feed and less. Depending upon your client, and his estimated production, the number of units required can be estimated from the tests reported in this letter.

Based on the results of these preliminary tests we would be pleased to provide you with a proposal to conduct additional studies to finalize a flowsheet. Additional studies would involve charges to B.C. Research, but these charges would apply toward purchase of PERMROLL® equipment.

If you have any questions concerning the above tests, please contact us via telex or phone.

Sincerely.

Edwin H. Bentzen III

Senior Process Engineer