

INTER-OFFICE COMMUNICATION



To: Le Herron
cc:

From: S. V. Chamberlain

Subject: Vermiculite

Date: June 24, 1977

I would like to give you my overview of the complete vermiculite picture which you can use to generate questions when we get together Wednesday, June 29th., prior to your visit with W. R. Grace.

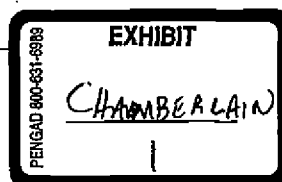
Our 1977 Budget Plan Vermiculite needs were projected to total 36,200 tons. Actual for the calendar year will probably be 37 to 38,000 tons. Although raw ore sieve specifications are the same for African and Libby ore, there is a difference after expansion. Consequently, our usage is approximately two-thirds Libby and one-third African, in order to maintain proper spreader settings, and fit our packaging. We are in the process of trying to determine why the difference after expansion, and what we must do to be consistent.

We do get a better yield from African ore than Libby (less sand and inert material), and it takes slightly less heat to expand African ore compared to Libby.

W. R. Grace has accepted the fact they have tremolite asbestos fibers in their vermiculite, and are trying to develop means of reducing the amount found in their ore. I think they have about reached the conclusion that they will not be able to remove it completely. To remove that last 1% or less contaminate, the cost become prohibitive.

The African source, on the other hand, has always maintained their ore contains no asbestos fibers. Everytime we sampled in Marysville, or brought samples into Marysville for testing, the laboratories we worked with would claim asbestos fibers. Over a year ago I suggested we take air samples from the warehouse located at Portsmouth, Ohio, when trucks are loaded. The warehouse has had only African ore in it, and would be a fair evaluation. This was finally done over a month ago. I understand when the samples were taken, the conditions were very dusty. The filters were sent to McCrone Labs, who are very highly recognized as an authority, to analyze for asbestos. They found fibers, but not asbestos fibers. We are funding them again to identify the fibers for us. When we drew samples in the past, we were taking them from our own environment. These fibers are microscopic, and continually float in the air. I'm afraid we were contaminating ourselves from other sources, or the laboratories used previously were giving incorrect reports.

Our continual badgering and expression of concern with American Vermiculite (South African source) prompted them to once and for all prove they are right. Previous reports they sent to us from their own lab in England, and from their operation in South Africa supported non-asbestos content. Our labs claimed their material did. I have talked with the representative since my memo of June 10. They are now working with an internationally recognized research foundation in Canada to evaluate their vermiculite ore, and set procedures for testing. It is Ontario Research Foundation, who has done work for EPA in the past. It will be a couple months at least before they can have the work completed.



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Identification of asbestos in vermiculite is a very difficult and complex problem. A potential new source (Virginia Vermiculite) gave me a copy of the attached report which I passed on to our research people. As I understand it, there are non-asbestos analogs, which under most testing methods appear very much like asbestos. Even vermiculite can distort many of the analysis methods. It requires megascopic and microscopic examination by experts to determine true asbestos.

The potential new source mentioned in previous paragraph has not broken ground yet. Anything I might say about them should be confidential as far as W. R. Grace is concerned.

Virginia Vermiculite Corporation was organized for the specific purpose of mining vermiculite in Louisa County, Virginia. I first talked with Dick Sansom early 1976, and on April 7th., he came into Marysville. Attached is copy of Call Report.

On my recent trip to the TFI meeting I took another day to visit their mine site. I met the landowner, Mr. Purcell, and saw the actual areas on the farm which will be mined. Also viewed the drawing, showing plant location, mine area, settling ponds, etc. Dick Sansom's son thus far has skillfully outfoxed the environmentalists. They have gotten all of their permits to start except EPA air permit which they expect to get Mid-July. The Sansoms like to do as much business within the county they plan to operate, so they applied for a Farmers Home Administration loan, and the environmentalists took them to court to try and block the loan. They don't need this loan, so are not concerned. They plan to start as soon as they get their EPA air permit. They would hope to be in production within a year, and have our quality for delivery late Summer-Fall 1978.

They, too, claim no asbestos in their vermiculite which would be great, if true. On June 30, 1976, we sent to them a letter of intent to purchase a minimum of 5,000 tons per year for a period of two (2) years, providing material meets all physical and chemical specifications, and delivery pricing terms, and conditions can be mutually agreed upon by both of us.

They are now asking if we might be interested in a financial interest in their company, say 25%. I said it was not our normal practice, but could give it consideration.

W. R. Grace also has extensive leases in this area of Virginia. They have elected not to mine the area at this time, since they now have production in Libby, Montana and Enoree, South Carolina. I also feel they do not want to fight the environmentalists. In fact, Grace test drilled the Purcell property, and tried to lease the property. The Purcell's felt they were being robbed by Grace, and refused to work with them. There were others who tried to lease the Purcell property, and Virginia Vermiculite was successful. They have a 22 year lease.

Grace at one time supplied vermiculite to Scotts from South Carolina and Libby, Montana. They refused to ship any vermiculite to us from South Carolina for a number of years. They claim their operation is reduced, and they need every bit for the East Coast. As you might suspect, even with a favorable commodity freight rate from Libby, the freight is much greater from Libby than South Carolina. Our current freight rate from Libby is \$21.61 per ton. I would estimate \$11.50 per ton from South Carolina.

Effective July 1, Grace will increase the price of vermiculite ore f.o.b. Libby, Montana, \$5.00 per ton. From \$43 to \$48 per ton, a 11.6% increase. We protested that this was too large a jump, but to no avail. We did get a verbal commitment to maintain our price at least for one year, but not in writing. They claim the only factors which could effect another price increase prior to July 1, 1978, are as follows:

1. Carter Energy program
2. Hydro electric problems
3. A technical break thru on removal of tremolite from their ore, and the cost of capital to do it.

On a delivered basis Libby ore would be \$69.61 per ton. This compares to current price on African ore of \$63.50 per ton. Keep in mind, African ore price is negotiated on each boat load that comes in, and the next load can be higher. At one time the African ore was higher price than domestic.

Another advantage in working with Virginia Vermiculite will be the freight advantage of approximately \$10.00 per ton.

One other point you may not be aware of. We are the only company that Grace sells ore. All of their other customers buy expanded vermiculite, or the ore goes to their own captive expanders. They are continually under the gun by people such as Lebanon Chemical, asking why Scott buys ore and they can't. The reason being, we bought ore from Zonolite before Grace purchased Zonolite and they were required to continue.

As you may or may not know, we use Zonolite (W. R. Grace) design furnaces. For this privilege we pay \$0.50 per ton royalty for every ton that goes through these furnaces. This has always been a thorn in my side as Grace knows how much we buy from other sources. I have tried to get it eliminated as a nuisance, but have been unsuccessful. The agreement was negotiated by Research a number of years ago, and I was not aware until after the fact.

This is somewhat a long winded dissertation, but I hope it gives you better understanding on what is happening in the vermiculite business. I'm ready for your questions.