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GRACE

Construction Products Division

April 13, 1978

REC'D
APR 18 1978
C.P.D. ENG.

TO: W. R. Hanlon

FROM: E. S. Wood

SUBJ: Lightweight Fertilizer Customer Fiber Exposures

cc: J. R. Becker
B. A. Blessington
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PLAINTIFF'S EXHIBIT WRG-1634

I have reviewed Jim Becker's recommendations (memo of March 14, 1978) with respect to assessing whether we have obligations to label Libby-based #4 vermiculite sold to lightweight fertilizer producers.

I would like to establish the following ground rules:

1. If engineering controls are required by users in order to assure employee exposures below 2.0 f/ml while utilizing our material, then we are obliged to label vermiculite derived from Libby ore.

2. Should we prefer not to label material, then our only acceptable alternative is to find a means of assuring exposures below 2.0 f/ml.

3. If you choose to continue to use Libby-derived product, you must present a convincing case, based upon actual samples taken at a variety of customers, that we can be assured of accurate identification of specific accounts where fiber exposure will not exceed 2.0 f/ml in reasonably foreseeable use.

After talking with Fred Eaton, he believes that he can successfully identify accounts where exposure is above 2.0 f/ml. Further testing will be necessary in order to confirm the opposite; that is, that he can successfully identify accounts where exposure is consistently below 2.0 f/ml.

I understand that a series of customer visits and samples are in process. Let's shoot for reviewing these results and making a final decision not later than May 15, 1978.

Any policies which we develop will be applied to all lightweight fertilizer uses, in all regions, including the Pacific.

ESW/CGR

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CASE A - Major Labelling Program and Withdrawal of All Consumer Products

I. Overall Case Assumptions

A. Fiber Counts to 1.0 OSHA (12/77) and 2.0 MESA (12/77)
B. Withdraw all Consumer Products - —
C. Lose Canada
D. Label all Libby Products except ZIC, MK, and Mixed Horticultural.

II. Market & Product Impacts

A. Withdrawal

Withdrawal from the Attic business results in simultaneous withdrawal of all Glass Fiber sales and a significant impact on dealer Plainboard sales (ranging from 20% loss in 1977 to 31% in 1980).

Withdrawal from Horticultural Consumer market results in total loss of consumer Terra-lite and mixed product sales. These consumer sales losses are partially offset by increases (20% in 1977 and 30% in 1980) in horticultural perlite sales to consumer through substitution of perlite.

B. Labelling

Only products produced from Libby ore would be labelled. The estimated impact of labelling products varies from product to product and is summarized as follows:

Masonry Fill - 20% drop in volume in 1977 and continued declines of 10% per year until by 1980 the volume is only 50% of 1977B volume.

Plaster Ag - 50% drop in 1977 and another 50% drop in 1978 so that by 1980 the volume is only 25% of 1977 volume.

Misc. Expanded - An immediate drop of 10% in 1977, but a gradual rebound in volume of 4% per year so that by 1980 Misc. Expanded volume is only 2% off of the Base Case.

Ag Bag & Bulk - Declines from 30% off of Base Case volume in 1977 to 70% below Base Case volumes in 1980.

Terralite (Professional) - Decline of 50% in 1977 and an additional 20% off of 1977 volume by 1980. However, this impact is also partially offset by improved Horticultural Perlite sales to the professional market (20% in 1977 and 30% in 1980) and a 10-15% increase in non-labelled Horticultural Professional mixes (eg. Metro-mix). The latter favorable impact results from additional substitution of vermiculite with perlite and mixed products.

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CASE B - Selective Consumer Product Withdrawal; Labelling all other Consumer Products.

I. Overall Case Assumptions

A. OSHA to 1.0 f/ml by 12/77 and 0.5 f/ml by 12/80
MESA to 2.0 f/ml by 12/77

B. Withdraw only Attic, Pool Cushion, Glass Fiber, and Santoquin.

C. Label all other consumer products; Ag/Bag if on Libby.

D. Avoid labelling by bringing tremolite in products to lower levels, e.g., treatment, use of South Carolina ore, etc.

E. Canada stays in Attic business.

II. Market & Product Impacts

A. Withdrawal

Withdraw from Attic business results in simultaneous withdrawal of Glass Fiber and a significant impact on dealer Plainboard sales (same as CASE A).

Withdrawal of Pool Cushion and Santoquin have no impact on other Ag sales.

B. Labelling

Only consumer Products and Ag Bag & Bulk from Libby ore would be labelled. Labelling impact is summarized below:

Ag Bag & Bulk - Same as CASE A.

Terra-lite Consumer - 15% reduction versus Base Case in 1977 and eventually 50% of Base Case volume by 1980. Offset by 30% increase in Hort. Perlite.

Soil Mixes - Consumer - 15% reduction versus Base Case in 1977 and down to 25% off Base Case volume by 1980.

C. Treated Products

To avoid labelling, Masonry Fill, Misc. expanded, and Plaster Aggregate are treated with a water or water/oil solution to achieve fiber standards in finished products. This treatment results in 6.0% yield penalty on coarse Libby ore sizes and 3.0% penalty on Libby sizes 3 & 4.

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