



INTERNAL
CORRESPONDENCE RECEIVED

APR 10 1987

P.O. BOX 44, TONAWANDA, NEW YORK 14151-0044
TELEX 754632

~~E. K. JENSEN~~

To	M. D. Brower - Danbury P-2623	Date	April 7, 1987
	D. Crowell - Danbury E-3246		
	N. A. DiFranco - Somerset		Gas Products Production
	<u>E. K. Jensen - Danbury R-4667</u>	Originating Dept.	
	R. S. Kramer - Danbury R-4655		<u>Vermiculite</u>
Copy to	W. M. Therrien - Danbury R-2676	Subject	
	D. E. White - Tonawanda		

W. R. Grace's letter of October 11, 1986 alerted us to a potential problem in that vermiculite produced by their Libby Montana mine may contain asbestos fibers. Grace's solution was to wet down the packaged vermiculite to reduce airborne asbestos to levels in compliance with OSHA standards. The solution is not acceptable to Linde in that we cannot tolerate wetted vermiculite as a cold box insulation.

A group met in Danbury in January 1987 to discuss the problem and it was agreed that further information was required in order to develop a plan of action. The following summarizes the information that has been developed since that meeting.

We have had 39 batch samples taken and tested by National Loss Control Service Corporation (NATLSCO). No asbestos content has been detected by NATLSCO in any of the samples. The vermiculite source at two locations; Wilmington and Pittsburg, California, has been positively identified by W. R. Grace as coming from the Libby mine. It is very likely that some of the other samples came from here also.

With Randy Kramer's assistance, all purchase orders to W. R. Grace for vermiculite dating back to 1983 were collected and transmitted to W. R. Grace with a request to identify the vermiculite source for each one. They responded within a week and were able to identify some and not others. A copy of Grace's March 19, 1987 letter to Randy is attached.

W. R. Grace also forwarded air sampling data collected while handling wetted vermiculite from the Libby mine. This data indicated that they were in conformance with OSHA's July 1986 regulations in all cases. The data really is not significant to Linde as we cannot tolerate wet vermiculite. Grace's March 19 letter also indicates that their South Carolina source is in conformance without wetting.

We have also had discussions with other suppliers of vermiculite. Strong-Lite Inc. is a midwest supplier of vermiculite with whom we have done very little business. They have submitted a study of air sampling conducted in 1986 covering their mining, processing and packaging operations, all of which were in compliance with OSHA regulations. Their mine source is also in South Carolina. Two companies supplying vermiculite to the Central region have also responded with test data. J. P. Austin Associates Inc. submitted information on a South African source and Therm-O-Rock Company submitted test data on a Virginia source. None of this information included any asbestos content to be alarmed about.

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Discussions have also been held with testing laboratories and bulk handlers to determine what on-site action would be required if we found an intolerable amount of asbestos in the vermiculite at any location. This now becomes a new ballgame. Most bulk handlers are not equipped to handle asbestos contaminated products. Those that are, such as Specialty Vacuum Inc. of St. Louis, Missouri, have limited capabilities and would handle and bag the insulation with equipment similar to that shown in the attachment. On-site air sampling would be required throughout the operation by a qualified lab such as NATLSCO and their quotation is also attached. It can be seen that this becomes a very expensive and time consuming operation. Nothing that we have uncovered so far indicates the need for any of these special precautions in handling vermiculite.

After developing the above information, it is recommended that we proceed as follows:

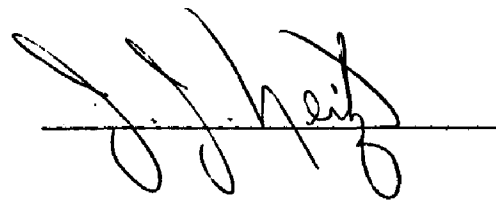
- (a) Revise MPS-201, the Material Purchase Specification for vermiculite to include a requirement that every batch be certified free of asbestos. Once revised, this specification should be enforced and the certification kept in a retrievable file if needed for future verification. Material Safety Data Sheets (MSDS) should also be requested with each order and kept on file.
- (b) Instruct all purchasing locations to avoid purchasing vermiculite from W. R. Grace's Libby, Montana source. If W. R. Grace is the chosen vendor, then supply must come from the South Carolina source and be certified to be "asbestos free." This could involve transportation penalties west of the Mississippi which must be evaluated.
- (c) We should continue to handle vermiculite taking the normal precautions for insulation handling as outlined in the Gas Products Production Safety Manual, Section 25.
- (d) We presently have vermiculite in 93 cold boxes at 35 locations around the country. The vermiculite has come from several sources and in many cases the source cannot be identified. As mentioned previously, we have tested 39 of these boxes without finding evidence of asbestos. This has cost us approximately \$2500. The remaining 54 boxes could be tested at an additional cost of \$3500. This is not recommended as the data we already have appears to be a good representative sampling and indicative that a field problem does not exist.
- (e) We could also hire NATLSCO or a similar laboratory to conduct air sample testing during a typical vermiculite transfer operation. This would cost several thousand dollars, and unless we are aware of asbestos content through prior batch testing, would probably reaffirm that a problem does not exist. This action is not recommended either.

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April 7, 1987

- (f) In summary, if we implement and enforce recommendations (a), (b) and (c) above, this should be sufficient to ensure that we don't purchase any asbestos-contaminated vermiculite and that the vermiculite is handled safely. From information developed to date, the existing cold box insulation does not appear to present a problem of asbestos content, and no further action is recommended to confirm this.

We would appreciate comments from the recipients of this letter on the recommended course of action. If another meeting of interested parties is required, please advise.

A handwritten signature, likely of J. J. Neitz, is written over a horizontal line. The signature is stylized and cursive.

J. J. Neitz/jps
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NATLSCO

March 30, 1987

Mr. J.J. Neitz
Union Carbide Corporation
Linde Division
P.O. Box 44
Tonawanda, New York 14151 - 0044

Dear Mr. Neitz:

Thank you for your interest in NATLSCO Industrial Hygiene services. It is our pleasure to offer this proposal.

If selected for this project, we will have one of our experienced Associate Industrial Hygienists visit your facility to collect air samples while vermiculite is being handled. The study will be conducted by using small, battery operated pumps, appropriate filter media, and other equipment to collect air samples as needed.

Subsequent to the visit, the samples will be returned to our Environmental Sciences Laboratory for analysis. The lab is accredited by the American Industrial Hygiene Association.

Under normal conditions, NATLSCO's final report would be mailed within 40 days of the last study date. The report would be structured as follows:

Introduction
Summary of Results
Recommendations
Equipment and Study Procedures
Discussion
Data Tables

NATLSCO has a formal Quality Assurance Program. Every report prepared by a NATLSCO field industrial hygienist is reviewed prior to mailing by a Manager of Industrial Hygiene, ABIH certified in the comprehensive practice of industrial hygiene.

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Mr. J.J. Neitz
Union Carbide Corporation
Linde Division
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The estimated on-site cost per day for this project is as follows:

Visit and Travel Time - 9 hours at \$45 per hour	\$405.00
Report Time - 2 hours at \$45 per hour	90.00
<u>Laboratory Fees - 10 samples @ \$25 per sample</u>	<u>250.00</u>
DAILY TOTAL	\$745.00

The above contains an estimate of the amount of report writing time which is generated by each day in the field. The actual time spent preparing the report would be charged for each project.

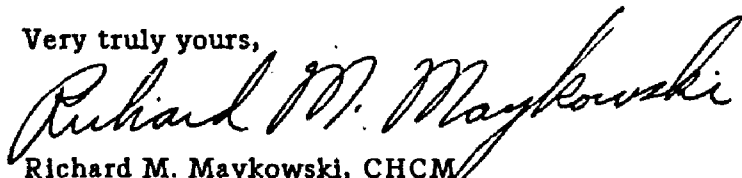
Likewise, the laboratory fees are based on an estimate of ten samples per day for fiber count using phase contrast microscopy (PCM) as specified in the OSHA standards. If more or fewer samples are collected, the charges will be adjusted accordingly. If "as soon as possible" (ASAP) service is requested, a 50% surcharge will be added to the laboratory fees, bringing the cost per sample to \$37.50.

In addition, travel expenses will be billed at cost and will depend on the location of the work site.

This proposal is valid for 90 days. Work can commence upon receipt of a purchase order or letter of intent.

If you have any questions regarding this proposal, please do not hesitate to contact me. I look forward to hearing from you in the near future.

Very truly yours,

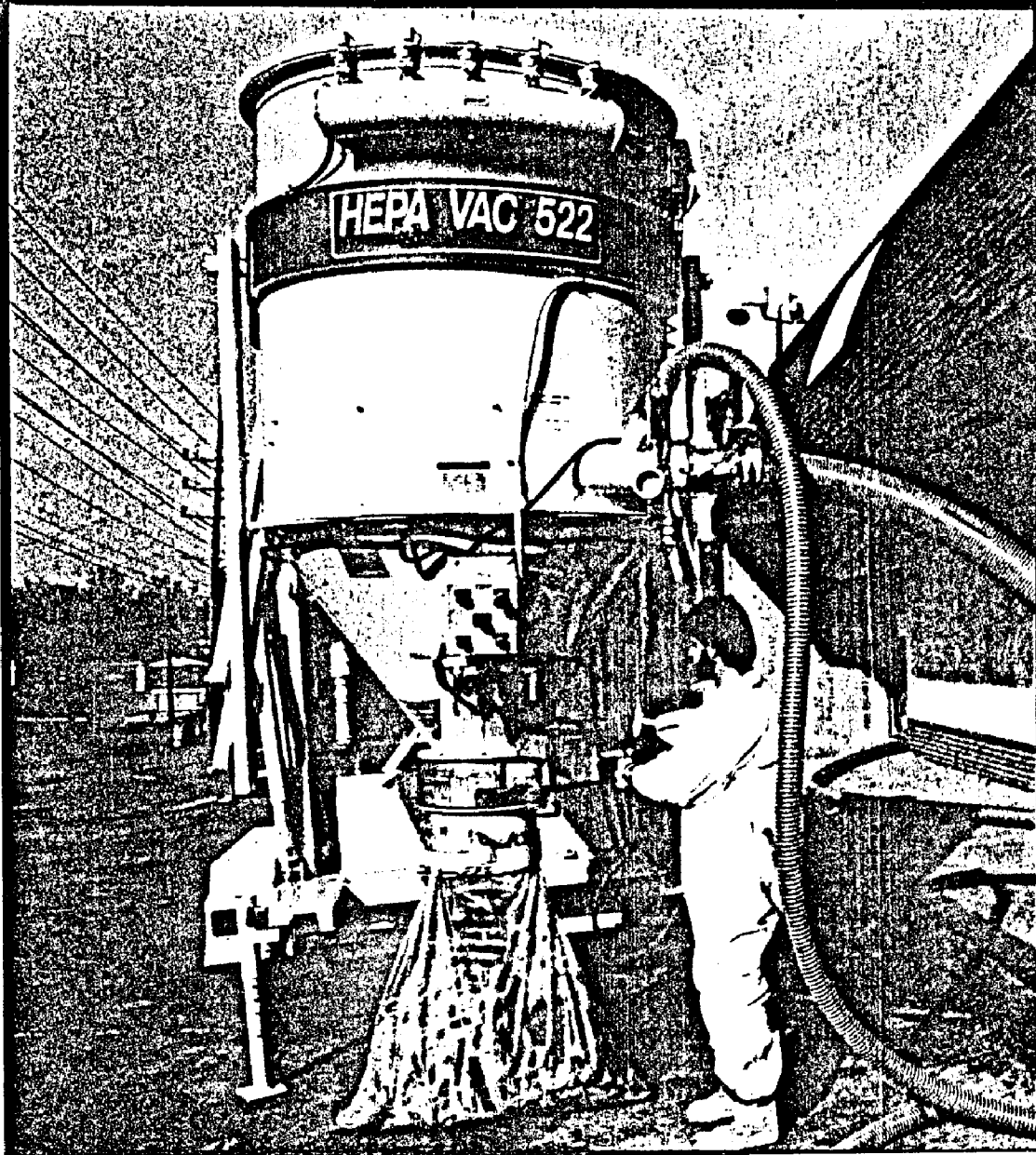


Richard M. Maykowski, CHCM
Assistant Manager of Industrial Hygiene
Certified/Comprehensive Practice
Direct Dial Number: (312) 540-4159

RMM/jjt
8032H

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SVinc. Specialty Vacuum



Gary Storr

(314) 544-2800

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Specialty
Vacuum
SVinc.

9403 GRAVOIS AVENUE • ST. LOUIS, MISSOURI 63123
UCC 009981



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APR - 1 1987

J. J. NEITZ

March 26, 1987
Mr. Jack Neitz
Union Carbide
Linde Division
P.O. Box 44
Tonawanda, NY 14151-0044

Dear Mr. Neitz:

As per your request, I am writing to introduce you to our company. We have been commercial and industrial vacuum contractors for the past eight years. Some of our equipment is equipped with the necessary air filtration for us to vacuum asbestos containing material.

I understand that some of your plants may contain a granular pipe insulation which contains some asbestos. In the event that you need to remove this material, we would be happy to offer you a proposal to perform this work.

Enclosed please find a copy of our brochure, which explains our equipment and the services that we perform. When you have further questions regarding how we can aid you, please call me. We look forward to serving you.

Sincerely,

SPECIALTY VACUUM, INC.

A handwritten signature in cursive script, appearing to read "Gary J. Storr".

Gary J. Storr / Sales Manager

encl.

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GRACE

To: Jack Neitz
Dw Brower

Construction Products Division

W.R. Grace & Co.
62 Whittemore Avenue
Cambridge, Mass. 02140

(617) 876-1400

March 19, 1987

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APR - 6 1987

J. J. NEITZ

Mr. R. S. Kramer
National Materials Manager
Union Carbide Corporation
Linde Division
39 Old Ridgebury Road
Danbury, CT 06817-0001

Dear Mr. Kramer:

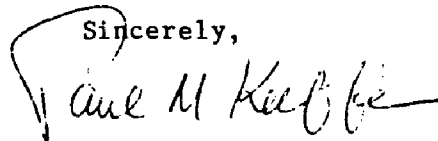
This is a response to your memo to me dated March 12, 1987.

As you requested, we have reviewed the purchase orders you sent to identify whether the products were made from Enoree, South Carolina or Libby, Montana ore concentrate. Hand-written notations were made on sixteen of the twenty-eight orders where the mine source could be identified; the balance (twelve) are labelled "unknown".

A response to your request for air sampling data is also enclosed. This information demonstrates the conformance of dampened Grace (Libby) expanded industrial vermiculite to OSHA regulations which became effective in July 1986. Our dry expanded vermiculite is produced from Enoree, South Carolina concentrate and meets OSHA regulations without dampening.

Please call if I can help with any other items.

Sincerely,



Paul M. Keefe
Marketing & Sales Manager

PMK:mg

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