

Inter Office

General Products Division
Saline Plant

August 26, 1975

To: D. A. Greschaw
Industrial Hygiene

From: W. B. Kozemchak

cc: F. J. Croskey N. S. Tracy
F. J. Serbus J. D. Woods

Subject: Talc Evaluation (Method of Testing for Asbestos)

Please find enclosed two samples of talc to be evaluated for asbestos or asbestiform minerals. A detailed percent chemical analysis is required. This information is required to establish a second talc source for our Plant.

The following two samples are being submitted:

- a) Pfizer Minerals, Montana Talc - Grade BX #128
- b) R. T. Vanderbilt, New York Talc - Grade 200

The above two talcs have been evaluated by Ford Motor Gate #4. Their analysis indicates asbestos contents in both grades. However, the suppliers have certified that their products contain no asbestos or asbestiform minerals, detectable when examined by X-ray diffraction. They indicate they comply with OSHA 1910.93A and OSHA Field Directive #74-92.

The disagreement between the suppliers and Gate #4 is on the method of testing. Asbestos fibers cannot be found using the X-ray diffraction method and found using the transmission electron microscope.

A uniform Company test method should be established for asbestos detection to comply with existing OSHA regulations and proposed regulations.

Due to reordering commitments, a 9-15-75 answering date would be desirable.

W. B. Kozemchak

Safety Engineer

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Inter Office

Personnel and Organization Staff

Mr. W. B. Kozemchak
Safety Engineer
Saline Plant

October 28, 1975

cc R. J. Foster, M.D.
F. H. Sayles
J. D. Wood

Subject: Determination of "Asbestos Fiber" Content of Bulk Talc

As requested and discussed, we concur there is a need for a uniform procedure for determining "asbestos fibers" in bulk filler material prior to introduction of questionable material in plant operations. This was precipitated by the needs of the Saline Plant in considering two suppliers of talc and interpretation of results.

In discussions with other environmental health personnel, it is apparent there are differences of opinion on needed procedures and interpretations of any results. However, it appears that the approach by L. Roslinski, Industrial Toxicologist, is a practical approach based on current knowledge and requirements.

In summary, questionable bulk material procedure:

1. Obtain written certification from supplier of absence of asbestos and methods utilized.
2. Confirm by X-ray diffraction analysis to determine quantitatively and qualitatively if a "pattern" indicative of asbestos does not exist.
3. If asbestos is indicated from above, microscopy studies would be needed. Scientific Research has such instrumentation.

With respect to the two suppliers, Pfizer Minerals, Montana Talc (Grade BX-128) and R.T. Vanderbilt, New York Talc (Grade 200), the following is thus needed by this office.

- Copy of certification and method from suppliers, you indicated has already certified the absence of "asbestos or asbestiform minerals" by X-ray diffraction.
- Copy of any completed Gate 4 laboratory results and analytical methods utilized.
- If confirming X-ray diffraction was not performed, request Gate 4 and/or other approved laboratory to perform such.

Based on a review of the above data by this office, a determination can be made of further laboratory/field evaluation is needed. As you know, some form of documentation is necessary either before or after any government inspection where airborne results indicate excessive "fibers," which could be from many sources such as cardboard shredding.

D. A. Greschaw

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Inter Office

Personnel and Organization Staff

September 10, 1975

Mr. Don Greschaw

Subject: Asbestos Sampling and Identification

There appears to be a debate regarding the determination as to whether mineral materials used primarily as "filler" materials are composed of or contain asbestos. The sampling of such materials for determination of compliance to OSHA requirements and/or for the determination of "asbestos" fibers is clouded by the uncertainty of the two questions: Is an observed entity a fiber, and if so, is it an asbestos fiber?

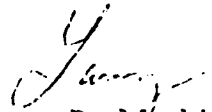
The following recommendations may aid in resolving this problem.

1. Bulk samples of the material(s) in question should be analyzed initially by x-ray diffraction to determine quantitatively and qualitatively if a "pattern" indicative of asbestos results and what percent, if any, of such a sample constitutes asbestos. If asbestos is indicated or suspected after x-ray diffraction analysis, a bulk sample should be prepared for microscopy studies. Any fibers present should be evaluated and classified (length to width ratios, evidence of fibrils, etc.). Although phase-contrast microscopy at around 500x is called for by OSHA, it would seem that electron microscopy when available would be a more accurate and ideal tool. If asbestos fibers are identified and confirmed by these two techniques asbestos should be assumed to be in the sample and an industrial hygiene determination must be made to determine the likelihood of OSHA standards being exceeded for any particular operation.

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2. Breathing zone samples of materials currently in use and known to be or contain asbestos should be analyzed by microscopy to determine OSHA compliance.
3. Breathing zone samples of materials of questionable asbestos nature should be supplemented with x-ray diffraction analysis of bulk samples of the same material.


Larry Roslinski

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