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January 6, 1972

Miss Frances E. Mett
Powhatan Mining Company
6721 Windsor Mill Road
Baltimore, Maryland 21207

Dear Miss Mett:

As explained in telephone conversations on December 21, 1971 and January 5, 1972 by Mr. V. R. Miller, an engineer in this Section, a check of the asbestos exposure experienced by your employees during crushing, milling and bagging operations is required at an early date as an occupational health precaution. It is proposed to accomplish the check by personal monitoring of workers who are actively performing the normal tasks directly associated with each of these specific operations. Simultaneous operation of all units is not necessary for our sampling purposes and repeat visits can be made to evaluate the effectiveness of controls at each equipment when it is in use.

In view of the sporadic nature of your operations, it is requested that you notify Mr. Beegan (363-2736) or Mr. Miller (363-2739) when you schedule any crushing, milling or bagging activity. Notice as short as the day before the planned usage is sufficient, but longer notice would be appreciated.

Very truly yours,

James A. Beegan, Head
Industrial Health Engineering Section

Stamp: JAN 11 1972

cc: Mr. Chaney

Mr. Schueneman

Mr. W. L. Phillips, Balto. Co. Dept. of Health

Div. of Air Pollution & Ind. Hygiene

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J.A. 1/6/12-13

STATE OF MARYLAND
DEPARTMENT OF HEALTH AND MENTAL HYGIENE
ENVIRONMENTAL HEALTH ADMINISTRATION

610 N. HOWARD STREET • BALTIMORE, MARYLAND 21201

Neil Solomon, M.D. Ph.D. Secretary

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BALTIMORE COUNTY
HEALTH DEPARTMENT

February 23, 1972

Miss Frances E. Mett
Powhatan Mining Company
6721 Windsor Mill Road
Baltimore, Maryland 21207

Dear Miss Mett:

Mr. Thomas H. Devlin, Director, Bureau of Environmental Health, Baltimore County Department of Health, has indicated that you are interested in receiving data concerning the results of sampling for asbestos levels done at Powhatan Mining Company. Inasmuch as the sampling program is still in progress, some background information regarding this program is felt to be in order.

Asbestos has been recognized for a long time as an occupational health hazard, but only in recent years has asbestos dust been looked at from the viewpoint of its potential hazard to community health. Limits have not been established yet for asbestos dust as a community air pollutant. However, on August 31, 1971, your plant was inspected to assess the potential public health hazard of your operations by a party consisting of the following:

Baltimore County Health Department, Division of Air Pollution and Industrial Hygiene - Larry Kirchner and Asit Hazra

Maryland State Department of Health and Mental Hygiene, Division of Air Quality Control - George P. Ferreri, Chris Zerby and Richard Johnson; Industrial Hygiene - James Beegan and Sunil Patel

This inspection resulted in the conclusion that the plant appeared to comply with the current air quality regulations with the exception of a minor emission noted on the roof. The main concern was the in-plant effect of suspended particulates on the plant employees and it was decided that air samples should be taken to evaluate the occupational exposure.

February 23, 1972

On September 22, 1971, a party consisting of Richard Johnson, Paul Guglielmoni and James Beegan from the Maryland State Department of Health and Mental Hygiene sampled two locations in your plant. These locations were at the bagging operation (output from #20 impact mill) and in vicinity of the ore dryer on the main level above. A stack sampler fitted with filters was used for collection, sampling period was 30 minutes at each location. Analysis of the filters by Mt. Sinai School of Medicine in New York showed 7,800 asbestos fibers longer than 5 microns per liter of air at the bagging site and 5,500 asbestos fibers longer than 5 microns per liter of air at the dryer. These concentrations were in excess of the intended change Threshold Limit Value for asbestos as published by the American Conference of Governmental Industrial Hygienists. The in-plant atmospheric environment on the basis of these two tests was consequently sub-marginal and additional sampling was deemed to be necessary for proper evaluation to be made.

Subsequently, pursuant to the Williams-Steiger Occupational Safety and Health Act of 1970, the Department of Labor issued an Emergency Standard for Exposure to Asbestos Dust effective upon publication in the Federal Register (12-7-71). A copy of the pertinent pages (23207 and 23208) of Federal Register, Vol. 36, No. 234 - Tuesday, December 7, 1971 is enclosed. In substance, the emergency standard is the intended change Threshold Limit Value of the ACGIH, i.e. the 8-hour time-weighted average airborne concentration of asbestos dust to which employees are exposed shall not exceed 5 fibers per milliliter greater than 5 microns in length, as determined by the membrane filter method at 400-450X magnification (4 millimeter objective) phase contrast illumination, with excursions above 5 fibers per milliliter, but not to exceed 10 fibers per milliliter, permitted up to a total of 15 minutes in an hour for up to 5 hours in an 8-hour day. Methods of control including engineering, handling, housekeeping and respiratory protection are also specified to prevent overexposures.

The in-depth sampling program was started on February 3rd by James Beegan, William Miller and Richard Johnson at the bagging operation associated with the Hazemag #20 impact mill. The two workers on this operation were monitored by attachment of personnel samplers (two devices on each man). In this way, four 60-minute and twelve 30-minute samples were collected on filters. The 60-minute and eight 30-minute filters have been forwarded to Mt. Sinai School of Medicine for analysis. Four 30-minute filters have been delivered to the State Laboratory for check analysis. To date, the results of the analyses have not been reported from either laboratory.

Continuation of the in-depth sampling program is anticipated by similarly monitoring workers in the vicinity of the primary crusher, bagger associated with #30 impact mill, driers and other operations productive of

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fugitive asbestos dust. Advance notification of scheduled operation of any of the dust-producing devices enumerated is again earnestly requested.

Sincerely yours,



James A. Beogan, Head
Industrial Health Engineering Section

JAB:lw

Enclosure

cc: Mr. Dale Anderson, County Executive
Mr. Thomas Devlin, Baltimore County Department of Health ✓
Mr. W. L. Phillips, Baltimore County Department of Health
Mr. Jean Schueneman, Maryland State Dept. of Health and Mental Hygiene

STATE OF MARYLAND
DEPARTMENT OF HEALTH AND MENTAL HYGIENE
ENVIRONMENTAL HEALTH ADMINISTRATION

610 N. HOWARD STREET • BALTIMORE, MARYLAND 21201

Neil Solomon, M.D. Ph.D. Secretary

April 25, 1972

Miss Frances E. Mett
Powhatan Mining Company
6721 Windsor Mill Road
Baltimore, Maryland 21207

Dear Miss Mett:

On February 3, 1972, an asbestos dust sampling study was made by James Beagan, William Miller and Richard Johnson at the bagging operation associated with the Hazemag #20 Impact mill. The two workers on this operation were monitored by attachment of personnel samplers (two devices per man). Results of the dust counts obtained on the twelve filters analyzed by Mt. Sinai School of Medicine have been received. Report of the concentration of asbestos fibers per cubic centimeter (milliliter) follows:

	<u>Operator A</u>		<u>Operator B</u>	
60-minute samples	8.3	6.1	7.1	9.2
First 30-minute samples	5.5	9.1	9.3	13.1
Second 30-minute samples	6.6	11.5	14.8	11.0

Average 12 samples: 9.3 asbestos fibers/cc.

All of these values exceed the 8-hour time-weighted average airborne concentration of 5 fibers per milliliter permitted by the Emergency Standard for Exposure to Asbestos Dust issued by the Department of Labor and published in the Federal Register, Vol. 36, No. 234 - Tuesday, December 7, 1971. A copy of the applicable pages (23207 and 23208) was enclosed with our letter of February 23, 1972. Improved controls are necessary to meet the current emergency standard. In this connection, engineering studies should bear in mind that a permanent limitation of 2 fibers per milliliter for an 8-hour weighted average exposure with strong advocacy for a lower limitation is under consideration. The permanent standard is expected to be adopted and published in June, 1972. Engineering methods, such as enclosure, vacuum sweeping, local exhaust ventilation, etc., are specified in paragraph 1910.93a (b) of the Emergency Standard for Exposure to Asbestos Dust as

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mandatory to meet the exposure limit. Accordingly, the requirements of 1910.93a (d)(2) for local exhaust ventilation of machinery, 1910.93a (f) for collection and disposal of asbestos waste and scrap in sealed bags or containers, and 1910.93a (g) for cleanup of asbestos by vacuum cleaners and prohibition of dry sweeping or blowing of dust are engineering methods required at your plant.

Respiratory protective devices covered in 1910.93a (o) are considered to be interim measures pending accomplishment of adequate engineering controls. Under the permanent standard mentioned above, when the new limits of exposure to asbestos dust cannot be met by limiting the concentration of asbestos dust in the work environment, an employer will probably be required to utilize a program of respiratory protection and furnishing of protective clothing to effect the required protection of every worker exposed. Such use will most likely be deemed a variance under the Williams-Steiger Occupational Safety and Health Act of 1970. Variances are generally of limited duration and approval requires justification for the absence of adequate engineering controls. On the basis of asbestos dust concentrations in your plant, it is believed that respirators conforming to 1910.93a (c)(2) of the Emergency Standard for Exposure to Asbestos Dust are satisfactory and are required to be provided and worn by your employees when engaged in the dusty operations. Attention is invited to the provisions of 1910.93a (c)(1)(ii), 1910.93a (c)(5) and 1910.93a (c)(6) to insure proper protection and respirator upkeep.

In summary, the following recommendations are made for early accomplishment:

1. Provide respirators approved by U. S. Bureau of Mines under the provisions of 30 CFR Part 11 (Bureau of Mines Schedule 21 B) and enforce wearing of them by employees engaged in dusty operations.
2. Conduct general housecleaning operations with vacuum cleaning methods to remove settled dust from all surfaces.
3. Check all enclosed asbestos conveying systems, eliminate leaky joints and install covers at openings.
4. Install enclosures and local exhaust ventilation at all grinders, mills, and baggers.
5. Provide special devices to collect asbestos remaining in filling spouts of the baggers to prevent the material from becoming airborne or falling on floor.
6. Devise procedures to prevent asbestos contamination on the outside of shipping bags.

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7. Use vacuum cleaning methods on floors and discontinue dry sweeping methods.
8. Use vacuum cleaning methods on clothing and equipment and discontinue compressed air blowing for those purposes.

Continuation of the in-depth sampling program is held in abeyance until accomplishment of recommendations 1, 2, 3, 6, 7, and 8 which can be readily done. It is realized that recommendations 4 and 5 will require extensive design engineering and fabrication.

Sincerely yours,

James A. Deegan, Head
Industrial Health Engineering Section

JAB:WEM:lw

cc: Mr. W. L. Phillips, Baltimore County Dept. of Health
Mr. Jean J. Schueneman, Maryland State Dept. of Health and Mental Hygiene
Mr. John B. Craft, Division of Labor and Industry