Environmental Control Department
Research & Engineering Center
October 2, 1969

C. B. Burnett - GHQ
H. M. Ball - GHQ
J. B. Jobe - DHQ
K. V. Lindell - Asbestos 1500
A. B. Marchant - GHQ
A. C. Smith
Ivan Sabourin
W. L. VanDerbeek
Dr. G. W. Wright - GHQ

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REPORT OF MEETING
ENVIRONMENTAL CONTROL SUBCOMMITTEE
SEPTEMBER 15, 1969

Present at this meeting were:

H. M. Jackson
K. V. Lindell
W. L. VanDerbeek
Dr. G. W. Wright
E. M. Fenner.

The agenda as issued on August 25, 1969, (Attachment 1) was followed for this meeting.

(1) Bulletin On Environmental Control Standards

The newly revised Executive Bulletin (312-3) on Environmental Control Standards was reviewed and modified. The bulletin in its modified form, was discussed at the General Managers Meeting held the last week in September. The final bulletin, incorporating changes recommended at the General Managers Meeting, (Attachment 2), is now being prepared for distribution.

(2) Industrial Hygiene Resurvey - Manville Asbestos Textile Plant

A report, (Attachment 3), comparing the July/August resurvey of Manville Asbestos Textile Plant with the original membrane filter survey of February/March 1969, was discussed.

(3) Ambient Air Sampling Program

A data sheet, (Attachment 4), detailing the results of the ambient air sampling done since the issuance of the Environmental Control Department Report #10, dated September 1, 1969, was reviewed. It was recommended that the exposure of the bulldozer operator on the Jeffrey Tailings dump be measured. (Done and included in Attachment 4).

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Dr. Wright inquired if there might be asbestos fiber in the Millipore filter paper being used in our sampling program. Upon investigation it was learned that the filter paper manufacturer previously had stated that no fiber was used in this paper and that analysis work performed at our Research Center confirmed his statement.

(4) Personal Air Sample - Full Shift

The Eastern Area Industrial Hygiene Laboratory had recently sampled one Card Operator at Manville Asbestos Textile Plant for a total of 6 hours; four 90-minute samples.

Dr. Wright requested that this sampling procedure be repeated on a different operator at Manville Textiles. At the suggestion of H. M. Jackson, it was decided to sample the Card Room Stocker.

The results of these two sampling programs are shown on Attachment 5.

(5) Review of Membrane Filter/Personal Air Sampler Survey Program

Results of the program to date were very briefly discussed. At the conclusion of the discussion, Dr. Wright recommended a sampling program at Jeffrey Mill using the membrane filter for sampling and both the light microscope and the electron microscope for analysis of each sample. It was decided that 15 samples would be taken; 5 in a high dust area (above 12 F/cc); 5 in a medium dust area (6 - 12 F/cc); and 5 in a low dust area (below 6 F/cc). The electron microscope analysis technique will be such that its results may be compared with similar sampling and analysis work done by Dr. Selikoff's group at Mt. Sinai Hospital.

(6) Air and Water Pollution Problems

The status of our major air and water pollution problems is detailed in the Environmental Control Department Report #10. Three items not included in this report were discussed:

(a) A complaint was received from a close neighbor to Waterville 07 Plant concerning fiber glass microfibers being deposited on property where he is creating a real estate subdivision.

(b) A citation was received from the State of Colorado Department of Health notifying us that stack emissions at our Florence Plant exceeded State standards. The Environmental Control Department is presently further investigating this situation.

(c) The Goldfield-Greco fiber glass mat air filter is now in experimental operation on the #4 Asphalt Saturator at the Manville Roofing Plant.

E. M. Fenner, Secretary
ENVIRONMENTAL CONTROL SUBCOMMITTEE

Attach. (5)

cc: H. M. Jackson - DHQ

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(Attachment 1)

Proposed Agenda
Environmental Control Subcommittee Meeting
September 15, 1969

1. Discussion of revised bulletin on Environmental Control Standards.

2. Results of total resurvey of Manville Asbestos Textile Plant - conducted during July and August 1969.

3. Review of ambient air sampling data to determine future course of the program.

4. Results of personal air sampler survey on one Asbestos Textile employee for full shift.

5. Review of membrane filter/personal air sampler surveys completed to date.

6. Review of air and water pollution problems.

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(3) Unloading of Toxic Bagged Materials

The following procedures shall be used in unloading toxic bagged materials:

(a) Quality Control personnel shall inspect each shipment upon arrival to determine its condition and shall prepare a report on their findings.

(b) Spilled material shall be removed from all car, pallet and bag surfaces before and during the unloading operation, using suitable vacuum cleaning equipment.

(c) Torn bags shall be sealed with tape or covered with a slip bag as they are removed from the car. Patched bags shall be placed on separate pallets and used immediately in the production operation.

(d) Personnel engaged in the unloading operation shall wear respirators whenever broken bags and loose material are encountered.

(4) Asbestos Fiber Empty Bag Disposal

Jute fiber bags shall not be sold or reused within the plants. They shall be encased in plastic or paper bags and buried in a land fill dump, either by the plant or a contract hauler.

Used paper bags shall be encased in clean paper bags and used as furnish in the Paper Mill. The filled clean bags may be baled or otherwise compacted under dust controlled conditions, for easier handling. Where used paper bags cannot be disposed of by this method, they shall be handled in the same way as jute fiber bags.

(5) Pallet Cleaning

Dirty pallets shall be cleaned before reuse. They shall be vacuumed, water washed in a suitable drainage area, or air washed in a dust controlled booth.

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(Attachment 2) Sept. 16, 1969

EXECUTIVE BULLETIN

312-3 (Rev.)

Occupational Environmental Control Standards as set forth in Executive Bulletin 312-3 dated April 28, 1968, have been reviewed, and reaffirmed or revised based on experience. These Standards are detailed below and for effective Occupational Environmental Control they should be adopted at all locations.

(1) Brooms and Shovels

Brooms and shovels may be used for clean-up in areas and operations where their use does not create airborne toxic dust contamination in excess of the Johns-Manville Threshold Limit Values. Where the use of brooms and shovels does create such conditions; vacuum cleaners, central vacuum systems, vacuum booster systems connected to existing dust collection systems, and/or power sweepers shall be used instead.

(2) Fiber Feeding Operations

The following procedures shall be adopted at all fiber feeding stations:

(a) All asbestos fiber shall be supplied in clean, tight bags on clean pallets.

(b) New or revised dust control hoods shall be designed as shown on GPED Drawing 23758-1 "Bag Opening Station", modified as required by the local application.

(c) Bag disposal shall be accomplished without creating airborne fiber dust contamination.

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(6) Fiber Storage

Whenever possible, the principle of first in, first out, shall be applied to the warehousing of bagged fiber. In all cases, fiber inventory should be turned over once a year.

Plastic covers shall be used over fiber stored in unlined jute bags.

(7) Containers

Covers shall be used on all containers of asbestos fiber and other toxic dusty materials during transportation and storage.

(8) Dust Control Systems

New or rebuilt dust control systems must meet the following criteria:

(a) They must be engineered to maintain dust levels below the applicable Johns-Manville Threshold Limit Value (for example, 2 F/cc for asbestos fiber dusts, and 0.2 Mg/M^3 for lead dusts).

(b) They must meet basic design specifications as developed by DPE to assure maximum efficiency and minimum maintenance and clean-up requirements. They must be maintained adequately to insure operation at design effectiveness.

(9) Visible Dusts

When visible dusts and chips do not create a hazardous condition, periodic clean-up of accumulation of such dusts and chips will be included in plant housekeeping schedules and programs. Frequency of clean-up will be determined by the requirement that accumulations must not create hazardous airborne dust concentrations and by Corporate Housekeeping Standards (E.C. 200 Series - Manual of Standard Practices).

W. L. VanDerbeek
Vice President for Production and Engineering

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FIBER DUST SURVEYS

MANVILLE TEXTILES

Operation		Total No.	No. Over 12 F/cc	No. Over 6 F/cc
Fiber Prep.	A	10	3	8
	B	10	5	7
Carding	A	16	2	16
	B	15	1	10
Spinning	A	8	8	8
Twisting	A	21	15	20
	B	20	11	18
Weaving	A	26	5	21
	B	24	0	13

A - Survey in Feb./Mar. 1969
B - Survey in July/Aug. 1969

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(Attachment 4)

AMBIENT AIR SAMPLING

I. Jeffrey

Station #7 - 1/8 mile downwind of the dumping operation on the Tailings Dump - 16 hour sampling time.

Station #8 - East of Station #7 - 16 hour sampling time.

Samples collected on 0.8 micron pore size 37 mm diameter millipore filter using a personal air sampler pump at 2 LPM.

Station No.	Date	Total F/cc	F/cc >5μ in Length
7	8/11	0.81	0.36
7	9/1	5.8	3.6
8	8/18	1.25	0.6

II. Scotch Plains

8 hour samples taken on the porch roof of G. L. Swallow's home in Scotch Plains.

Samples collected on 0.8 micron pore size 37 mm diameter Millipore filter using a personal air sampler pump at 2 LPM.

Date	F/cc >5μ in Length
9/6	0.075
9/7	0.04

Electron microscope analysis of these samples shows only a trace, almost nil, of asbestos fiber. Consequently, some of the fibrous material in the sample as noted under the light microscope was not asbestos.

III. Manville Borough

A high volume air sample was collected on the grounds of the Manville Borough Waste Treatment Plant. The sampling pump operated at 34 CFM for 25 hours. Collecting medium was an 8" x 10" 0.8 micron pore size Millipore filter.

The examination by light microscopy showed 0.55 F/cc >5μ in length. The electron microscope analysis indicated that only 1% of the total ash or less than 0.01 F/cc were asbestos.

IV. Jeffrey

Two membrane filter/personal air samples were taken on the Bulldozer Operator on the Tailings Dump.

Sample No.	Total Fibers/cc	F/cc Over 5μ
1	125.0 F/cc	46.6 F/cc
2	99.0 F/cc	30.7 F/cc

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(Attachment 5)

FULL SHIFT SAMPLING

One Card Room operator at Manville Asbestos Textile Plant was sampled for 6 hours; four consecutive 90-minute samples. Results are as follows:

(1) 7.0 F/cc > than 5μ in length

(2) 6.5 F/cc " " " " " "

(3) 6.2 F/cc " " " " " "

(4) 6.6 F/cc " " " " " "

The Card Room stocker was sampled for 4½ hours, three consecutive 90-minute samples. Results are as follows:

(1) 20.6 F/cc > than 5μ in length

(2) 17.5 F/cc " " " " " "

(3) 27.0 F/cc " " " " " "

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