FILE NAME: Abex (ABX)

DATE: 1968 Jan

DOC#: ABX125

DOCUMENT DESCRIPTION: Internal Inspection Report - Hygiene Survey for Lead and Asbestos with Apr 18 Cover Letter from Liberty Mutual Listing Corrections that have Taken Place

Abex Corporation

American Brakeblok Division

WINCHESTER, VIRGINIA 22601
TEL. 703-662-3871

April 18, 1986

Fwd. Hygiene
BP - Winchester

Mr. George M. Huckebra
Industrial Hygienist
Loss Prevention Department
Liberty Mutual Insurance Company
348 West Campbell Avenue
Roanoke, Virginia 24005

Dear Mr. Huckebra:

In reference to your hygiene survey taken at our plant on January 23 and January 24, 1986, for airborne lead and asbestos, the following are corrections and actions that have taken place.

SUBJECT: "Air Borne Dust"

Your samples number 5, 7, and 8

New rubber gasketing is being replaced on top of all hoppers in the area. Also, dust leaks down the sides near the gates in the hoppers are also being corrected.

The operator is being instructed not to open the windows in the area to create a draft. He is also being instructed to open the clam shell on the bottom of the mix buggy with caution, not to open fully all at once, to keep from creating as much dust as possible. Also, when opening the bags of asbestos, he is to keep the bag below the intake duct so it will receive as much dust as possible. This duct is working to its maximum capacity. This should be very effective for this area.

PLAINTIFF'S EXHIBIT 343

American Brakeblok

The intake draft system in the hoppers (2 in each 1) is functioning properly. This will be much more effective after the gasketing is installed.

Your sample number 11

This operation was observed by plant engineering and myself and we found the intake draft system working at its maximum capacity. On our first observation of this, they were dumping our most dusty mix. All dust was being drawn up the intake draft, even the dust escaping from between the lower boards in the mix buggy. The day the survey was taken we feel the gates on the dust collector could have possibly been partially closed or the collector not working at its maximum capacity. The area now is clear of dust.

Your samples number 12 and 13

The dust collector was found to be working at approximately half of its capacity. It has been corrected.

We have installed in the rear of each preform a canvas curtain to contain escaping dust from getting away from the intake draft and keeping it out of the general room air. This has worked very effectively.

On each preform scale we have installed an intake draft tube extending from the main collector to collect dust when the operator is weighing the mix. This again will be very effective for the operators breathing zone and also the general area air.

SUBJECT: "Air Borne Lead"

Your sample number 4 is answered under samples number 12 and 13 under Air Borne Dust, paragraph two.

Your sample number 11 is answered under samples number 6, 7, and 8 under Air Borne Dust, paragraphs one and three.

We certainly feel that the above corrections will be very effective in containing dust in the various operators breathing zones and the general room air in the effected areas.

If I may be of any further assistance, please feel free to contact me.

Robert G. Brown
Personnel Manager

RGB/dm

cc: C. H. Borcherding, Jr.
C. C. Blackwell, Jr. M.D.
D. K. Rennie
G. A. Riley
C. E. Mallory
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TC
CD

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ABEX CORPORATION

AMERICAN BRAKEBLOK DIVISION

WINCHESTER, VIRGINIA

Hygiene Survey for Lead and Asbestos

On January 23 and 24, 1968, samples for airborne lead and asbestos dust were collected in the wet and dry compounding areas, in the book and the block press preforming areas and in the block and the strip finishing areas.

The lead samples were analyzed by our Hopkinton Laboratory and compared to a Threshold Limit Value of 0.2 Mg Pb/c.m. of air.

The dust samples were counted microscopically at 300X and compared to a Threshold Limit Value of 5 mppcf.

CONCLUSIONS:

1. Asbestos in Air: While some of the dust counts are above the recommended level of 5 mppcf for asbestos containing dust, examination of the samples under the microscope indicate that only a few of the particles counted are actually fibers and the other appears to be dust other than asbestos. Based on these observations I am not inclined to consider these levels as hazardous as suggested by the total count, but to temper this judgment in view of the fact that something less than 10% of the particles counted were actually fibers.

   Reference to the data sheet will show that the grinding operations appear to be well controlled and the operations which resulted in the higher dust count were those which a large volume of air was displaced such as in the dumping operation, and in the strip preform area.

2. Lead Concentrations in Air: Reference to the data sheet will show only two were above the recommended Threshold Limit Value of 0.2 Mg/c.m. of air.

One of these was general room air collected near press #8 in the strip preform area; in view of the other levels in this area and our observations, this is probably due to contamination of the filter paper somewhere in the sampling and/or packaging technique. All other samples collected in this area were well below this level and those collected in the breathing zone of the operator were well within the suggested Threshold Limit Value.

The other high concentration of the airborne lead was collected in the breathing zone of the operator dumping the scale hopper on the wet compound line. Our observation at the time was that a small plume of dust is released into the atmosphere when this operation is conducted.

Even considering the fact that this operation takes only a few minutes about 10-15 times per shift, this is still high enough to constitute a significant exposure and additional controls are warranted.

3. Exhaust Ventilation: With the exception of the strip preforming and the dumping from the upper level to the lower level, the exhaust ventilation equipment appears to be providing adequate controls. These two exceptions are probably due to the operation itself creating turbulent velocities in excess of the control velocities designed for these installations, and as a result dust is blown out of the influence of the exhausted environment. Even though the dust concentrations in these areas are not considered severely hazardous, they are high enough to warrant investigation into the feasibility of either providing better enclosures and/or increased velocities for these operations.

March 8, 1968

George W. Huckeba
Industrial Hygienist
Loss Prevention Department
Liberty Mutual Insurance Company

GWH/bm

cc: Dr. C. C. Blackwell, Jr.
Mr. Charles Borcherding

INDUSTRIAL HYGIENE CORRECTIONS REQUIRED

1. Wet Compound Line - Mixer Exhaust: It is recommended that all the mixers on the wet compound line be provided with an inward draft sufficient to control the puffs of dust which are released when dumping the weighing hopper.

2. Strip Press Preforming and Dumping Locations on First Floor: It is recommended that the exhaust ventilation on these locations be improved either by increased velocity or improved enclosure to a degree sufficient to control the puffs of dust emitted when operating the presses and dumping the material from the upper level to the lower level.

DISCUSSION:

On the days of the survey all operations appear to be operating normally and for the most part the exhaust ventilating equipment appeared to be doing the job for which it was intended.

As was mentioned earlier some of the dust concentrations are above the Threshold Limit Value of 5 mppcf suggested for dust containing asbestos. However, since something less than 10% of the particles counted were fibers, it is felt that the severity of the situation is not quite as serious as would be the case if all the particles were fibers.

MANAGEMENT INTEREST: The interest of management and supervision in providing a healthful environment seems to be carrying over well to the individual employees. During our survey we noted no evidence of ventilation equipment abuse or lack of respect on the part of the individual employees.

Since the exhausting of air contaminants for this plant is such an important part of the operation, it is urged that continued emphasis be placed on quality maintenance and proper utilization of equipment provided.

Data: (continued)

9.	Dry line weighing general room air before weighing asbestos. No dust apparent in the area.	0.2
10.	Operator's breathing zone weighing asbestos for dry line only, no other operations included in this sample.	4.8
11.	General room air on the ground level where the mills are dumped into the cart. Some dust noted to be escaping from the enclosure during the filling of the cart.	8.3
12.	Operator's breathing zone in the strip preform area. Some dust seemed to be coming out of the mole when the plate is placed on top of the filling. Most of the dust appears to be the tap which is dusted on the moles.	12.9
13.	General room in the strip preform area.	10.6

DATA

AIR BORNE LEAD

Method of Collection: Collected on filter paper using vacuum pump.

Method of Analysis: Dithizone method read on Beckman spectrophotometer.

Threshold Limit Value for air borne lead: 0.2 Mg./c. m.

SAMPLE #	LOCATION	RESULTS MgPb/c.m.
1.	Operator's breathing zone strip preform area mix #353.	.01
2.	Strip preform area press #5 operator's breathing zone mix #154.	.01
3.	General room air in back of press #6 in the strip preform area.	.14
4.	General room air back of press #8 in the strip preform area.	.21
5.	General room air wet line compounding.	.12
6.	Operator's breathing zone block grinding automatic bur and chamfer grinder.	.14
7.	General room air near dust collector room in block grinding area.	.02
8.	Operator's breathing zone in dry mix dump area on ground level - dumping mix at the time of sample.	.10
9.	General room air in dry mix dump area during dumping.	.09
10.	Operator's breathing zone with wet line compound weighing operation.	.04
11.	Operator's breathing zone during the dumping of the weighing hopper on the wet line - Note: There is no screen on this mixer and a small puff of dust is noted to be generated when first starting to empty the weighing hopper.	4.02