ABEX CORPORATION
AMERICAN BRAKEBLOK DIVISION
WINCHESTER, VIRGINIA

HYGIENE SURVEY FOR LEAD AND ASBESTOS

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CHARLES A. COLE, JR.
INDUSTRIAL HYGIENIST
LOSS PREVENTION DEPARTMENT

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On October 19 and 20, 1966, samples for airborne lead and asbestos dust were collected in the wet and dry compounding areas, in the book and block press preforming areas, in the block and strip finishing areas, and in the maintenance area where lead hammer heads are molded.

The samples for lead were all collected at operations in which lead was part of the basic compound.

The lead samples were analyzed by our Hopkinton, Massachusetts, laboratory and compared to a threshold limit value of 2.0 milligrams of lead per 10 cubic meters of air.

The dust samples were counted microscopically and compared to a threshold limit value of 5 million particles per cubic foot.

CONCLUSIONS

1. The lead and dust are controlled well below the threshold limit value at the book press preformers having exhaust systems; but concentrations detected at those not exhausted are excessive; and the exhaust systems should be completed as soon as possible.

2. The airborne lead detected at the unexhausted block press preformers is excessive, and exhaust controls should be installed on those machines as soon as possible.

3. The dust and lead detected in the block and strip finishing areas were well below the threshold limit values, and controls in those areas appear adequate.

4. The concentration of lead detected at the dry compounding line was below the threshold limit value, and present lead controls appear adequate.

5. The dust concentrations detected at the asbestos weighing station on the dry compounding line were below the threshold limit value, but the general room sample (#2) was greater than the threshold limit value. It appears that the dust detected may have come from the compounding line, and additional dust collecting equipment or a modification in compounding procedure may be needed.

6. The dust concentrations on the first floor under the dry mix line were almost exactly the threshold limit amount, and further exhaust controls may be needed there.

7. The lead and dust concentrations detected at the wet compounding line were greater than the threshold limit values, and further controls may be needed.

8. The lead concentrations detected at hammer head molding were well below the threshold limit value, and present controls appear adequate.

Charles A. Cole, Jr. bm

November 16, 1966

CAC/bm

Charles A. Cole, Jr.
Industrial Hygienist
Loss Prevention Department

RECOMMENDATIONS

1. Complete the installation of the planned air exhaust on the book and block press preformers as soon as possible.

2. Complete the installation of the new mixers and exhausted dumping location on the first floor of the dry line mixing as soon as possible.

3. Repair the hood at the asbestos weighing station on the wet mix line.

4. Replace the rubber gaskets that help to seal the joint between asbestos weighing hopper and the mixer on the wet line.

5. Check the procedure used at the wet line to be certain only the minimum possible airborne dust is generated when the asbestos is dumped.

6. Repair the defective damper valves on the wet mix line compounding so they can easily be opened and closed.

7. Check the final weighing location on the dry mix line to be certain the air exhaust provided is properly used.

DATA: Airborne Dust

METHOD OF COLLECTION: Vacuum pump with impingers, collected in distilled water

METHOD OF ANALYSIS: Counted microscopically using the light field technique with a Spencer Hemacytometer counting cell

THRESHOLD LIMIT VALUE: 5 Million particles per cubic foot of air for dust containing asbestos.

SAMPLE NUMBER	TIME	LOCATION	RESULT (MPPCF)*
	10/19/66		
1	2:25 PM 20 Min.	Operators breathing zone, weighing and dumping asbestos on dry line	5
2	3:40 PM 15 Min.	General room, breathing zone height, between dry line compounding and asbestos weighing	7
3	4:14 PM 15 Min.	Breathing zone of operator at wet mix line weighing and dumping asbestos and other ingredients	11.1
4	4:50 PM 25 Min.	Ground floor area where dry line dumped to carts. General room air and breathing zone while one mill unloaded	5.2
5	5:35 PM 10 Min.	Breathing zone of operator at book press preforming 11 and 15, no exhaust	11.7
6	5:35 PM 10 Min.	General room, breathing zone height between press 5 and 6	7.5
7	5:48 PM 10 Min.	Same as sample #6	5.3
8	5:48 PM 10 Min.	Breathing zone of operator at book press preforming 7 and 3, with exhaust	3.5
	10/20/66		
9	1:25 PM 10 Min.	Breathing zone of operator, #2 rough grinder in block finishing	2.0
10	1:40 PM 10 Min.	Breathing zone of operator, #5 finish grinder in block finishing	2.0

11	1:58 PM 10 Min.	Breathing zone of rough grinder #4 in block finishing	2.5
12	2:15 PM 10 Min.	Breathing zone of operator at drill in strip finishing	3.0

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* Millions of particles per cubic foot