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Governor

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STATE OF WASHINGTON
DEPARTMENT OF LABOR AND INDUSTRIES
P. O. Box 207
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DIVISION OF SAFETY

JOHN E. HILLIER, SUPERVISOR

June 28, 1972

Longview Fibre Company
P. O. Box 636
Longview, Washington 98632

Attention: Mr. John Klein, Technical Director

Gentlemen:

On May 25, 1972 a survey of your areas of asbestos use was performed by S. G. Cothrin, Industrial Hygienist.

Types of asbestos work performed are installation of asbestos containing preformed pipe covering, sawing of preformed pipe covering with hand and portable saber saws, mixing and spraying of wetted asbestos fiber, removal of old asbestos covering for repair purposes and addition of sacks of asbestos floats to the beaters and repulpers for the paper machines. All of the above work with the exception of asbestos float addition is performed by masons who include asbestos work as a portion of their regular job.

A brief description of the asbestos work practices follows:

Sawing of Preformed Pipe Covering

Sawing on both metal covered and uncovered preformed pipe covering is done with hand saws and portable saber saws. The sawing observed was performed in the cement shack, however it is possible that some of this work is done at the job site. No ventilation controls are provided for this job. The employee performing the sawing wears an approved reusable dust respirator. The pipe covering used was Johns-Manville Thermobestos which is primarily calcium silicate with an asbestos binder. No drop clothes were used and cleanup is apparently done by dry sweeping.

Installation of Preformed Pipe Covering

This work was not observed but it is assumed that some rasping and sawing of the material takes place at the job site and air samples obtained at other plants performing this type of work have shown excessive exposures.

Mixing and Spraying of Wetted Asbestos Fiber

This work is performed with a "Limpet" machine which is operated by two men. One man dumps dry fiber out of sacks into the machine hopper where it is fluffed and metered into a blower unit and then conveyed dry through a rubber hose and exits out the nozzle, still in a dry state. Water jets around the nozzle wet the fiber in mid-air causing it to cling to the surface being coated. The other man operates the nozzle at a distance of about 14 inches from the surface being coated. Some of the dust created during spraying is caused by the water jets kicking up dry previously applied asbestos. The Limpet mixer operator not only is exposed to dust from the dumping of sacks but also from the spraying operation. Both men wore approved reusable dust respirators.

Removal of Old Asbestos Insulation

Work observed was removal of corners on a furnace cascade which consisted of using a small hand pick to dig out the areas of old insulation in need of repair. This work appeared to be done quite carefully but easily visible dust generation could still be observed. The employee performing demolition wore an approved reusable dust respirator. No drop cloths were used and it is understood that cleanup is done by shoveling and sweeping.

Addition of Asbestos Floats to Beaters and Repulpers

The beatermen and broke beatermen add 40 pound sacks of asbestos floats to the beaters and repulpers in the paper mill. This material comes in paper sacks and is dumped with the sack intact into the units. Occasionally a sack is handled which has been torn in transit and most of the sacks observed had a light dust coating on them which may have been due to broken sacks in the shipment. The number of sacks dumped in the above areas varies quite a bit but probably averages about two sacks per hour per man.

Air Sampling

Air samples for asbestos dust were obtained by attaching portable sampling pumps with membrane filters to employees performing the different tasks. The samples were evaluated by the U. S. Public Health Service Method which gives the dust concentration in terms of fibers per milliliter of air (see attached data sheet). The TLV(1) for asbestos dust is five fibers per milliliter greater than five microns in length. This TLV will be changed to two fibers per milliliter in the near future.

The results of the air samples are shown in Table 1, page 4.

As shown in Table 1, samples obtained on the Limpet sprayer operator and during demolition work showed asbestos dust exposure well in excess of the TLV. Samples obtained during hand and saber sawing of pipe covering and operation of the Limpet mixer showed significant asbestos dust exposure although below the TLV of five fibers per milliliter.

RECOMMENDATIONS

1. Substitute relatively non-toxic insulation material for asbestos wherever possible.

2. Provide local exhaust ventilation for hand and portable saber sawing whether performed in the shop or field.

3. Require the use of approved dust respirators, either reusable or disposable types for installation of pipe covering.

4. Require the use of approved respiratory protection for spraying and operation of Limpet mixer. Refer to attached lists on air supplied respirators, reusable respirators and disposable respirators.

(1) TLV - Threshold limit values refer to airborne concentrations of substances and represent conditions under which it is believed that nearly all workers may be repeatedly exposed day after day without adverse effect.

TABLE 1

Asbestos Dust Concentrations - Employee's Breathing Zone

Sample No.	Sample Description	Sample Time Minutes	Dust Concentration fibers/milliliter
1024	Removing asbestos insulation with hand pick from corners of No. 18 furnace cascade.	14	42.0
1020	Spraying white Limpet (amosite) asbestos on corners of No. 18 furnace cascade, first 10 min. of sample did not include any spraying because of machine problems.	25	18.0
1023	Operating Limpet spray mixer in area of No. 18 furnace cascade, first 10 min. of sample did not include any spraying because of machine problem.	25	2.2
1010	Cutting metal covered Thermobestos pipe covering with saber saw in cement shack.	9	2.1
1009	Cutting Thermobestos pipe covering with hand saw in cement shack.	15	3.3
1025	Beaterman adding asbestos floats to No. 2 paper machine beaters, dumps one sack per beater every 45 minutes.	232	0.6
1019	No. 4 and 5 Broke Beaterman adding 2 bags per hour of asbestos floats to No. 5 repulper.	210	0.2
	TLV		5

5. Require the use of approved respiratory protection for all asbestos insulation demolition work.

6. Require the use of drop cloths wherever possible to reduce the escapement of pieces of asbestos to other areas in the plant.

7. Use an industrial vacuum cleaner to remove all insulation spillage. Do not sweep up asbestos waste.

8. Broken sacks of asbestos floats should be discarded upon receiving of shipment. Settled asbestos dust on sacks should be removed with a vacuum prior to handling.

Thank you for your cooperation in this matter and please contact the Industrial Hygiene Section concerning your plans to comply with the recommendations within thirty (30) days of receipt of this report.

Very truly yours,

Stanley G. Cothrin
Industrial Hygienist

L. A. Hansen, Ph.D.
Chief
Industrial Hygiene Section

SGC:grn
Enclosures

cc: L. A. Hansen