FILE NAME: Georgia Pacific (GP)

DATE: 1972 Sept 21

DOC#: GP126

DOCUMENT DESCRIPTION: Letter to GP from TX Dept of Health with Industry Hygiene Survey Results

Texas State Department of Health

JAMES E. PEAVY, M.D., M.P.H.
COMMISSIONER OF HEALTH

J. R. COPELAND, M.D.
DEPUTY COMMISSIONER

AUSTIN, TEXAS

BOARD OF HEALTH
HAMPTON C. ROBINSON, M.D., CHAIRMAN
ROBERT D. MORETON, M.D., VICE-CHAIRMAN
W. KENNETH THURMOND, D.D.S., SECRETARY
N. L. BARKER JR., M.D.
CHARLES MAX COLE, M. D.
MICKIE G. HOLCOMB, D. D.
JOHN M. SMITH JR., M. D.
JESS WAYNE WEST, R. PH.
ROYCE E. WISENBAKER, M. S. ENG.

September 22, 1972

Dave hard copy
Ed Swing
E. Clerk hard copy

Mr. K. W. Brown, Plant Manager
Georgia Pacific Corporation
Gypsum Division - Acme Plant
Box 330
Quanah, Texas 79252

Attention: Mr. Bill Howard
Safety Superintendent

Dear Mr. Brown:

An industrial hygiene survey was conducted at your plant on September 8, 1972 by Mr. Jerry F. Lauderdale, Assistant Engineer for our Industrial Hygiene Program, for the purpose of evaluating workers' exposure to asbestos in the Joint Systems Department. A copy of the report covering the observations and recommendations made as a result of the survey is enclosed.

We appreciate the cordial assistance given to Mr. Lauderdale by Mr. Bill Howard and the plant management during the survey.

Please do not hesitate to contact us if we may be of further assistance.

Yours very truly,

Martin C. Wukasch

Martin C. Wukasch, P.E., Director
Division of Occupational Health
and Radiation Control

INDUSTRIAL HYGIENE SURVEY
Georgia Pacific Corporation
Gypsum Division - Acme Plant
Quanah, Texas

On September 8, 1972, an industrial hygiene survey was performed by Jerry F. Lauderd Assistant Engineer, Industrial Hygiene Program, Texas State Department of Health, fo the purpose of detecting the exposure levels of employees in the Joint System Depart to airborne asbestos fibers. The survey was requested by Mr. Bill Howard, Safety Superintendent, through the Texas Health Department, Air Pollution Control Program. Mr. Sterling Clark, Supervisor of the Joint System Department, and other employees ga cordial assistance in conducting the survey.

The Joint System Department mixes and packages a compound, GP Triple Duty Joint Compound, which is used in construction to smooth joints between wall boards. This compound contains about 7% asbestos fibers, which helps give the compound the desired texture. The asbestos is received in sacks; the sacks are opened and poured into a hopper for automatic mixing. The product is put in sacks and stacked on pallets for shipping.

Asbestos has recently been recognized as one of the more dangerous pneumoconiosis producing substances, with undisputable evidence connecting asbestos exposure to increased probability of lung cancers and mesothelioma, especially among workers who smoke cigarettes. The current federal and state standard adopted in the Federal Register, Volume 37, No. 110, pp. 11320-11322, Wednesday, June 7, 1972, a copy of which is included, calls for an average of no more than five fibers, greater than five micrometer, per cubic centimeter of air, with a maximum of no more than ten fiber greater than micrometers, per cubic centimeter of air. This standard calls for a reduction on July 1, 1976, to two fibers, greater than 5 micrometers, per cubic centi meter of air. Further information on asbestos is contained in Occupational Exposure to Asbestos . . . criteria for a recommended standard, National Institute of Occupa- tional Safety and Health, 1014 Broadway, Cincinnati, Ohio.

In order to evaluate workers' exposure to asbestos in this area, personal air sampler were placed on workers. Airborne asbestos fibers were collected in the workers' breathing zone on a 0.8 micrometer pore size membrane filter held in an open-face holder. The samples were then counted, using accepted procedures. Sample results ar shown in Table 1.

The first operation sampled was the joint compound mixer. This worker took sacks of asbestos and other materials and dumped the desired amount into a hopper, which had an exhaust hood with three sides closed and a velocity of about 200 ft./min. through the open face. The mixer frequently put his head inside the hopper when dumping in asbestos.

Also, the mixer frequently had to dump half sacks and save the other half for the next batch, or weigh out the desired amount on a nearby scale. These work procedures undoubtedly exposed the worker to higher asbestos levels than would be encountered if all asbestos bag openings were done under the exhaust hood. The mixer and the other two workers in this area wore MSA Dustfore '66 respirators, BM 21B-113. Worker wore gloves and aprons. Table 1 shows samples 1-4 taken from the breathing zone of

the mixer. On the basis of these samples, it appears that the mixer is exposed to an average concentration of 7 fibers, greater than five micrometers, per cubic centimeter of air. Also, the sample #2 indicates an average of 10 fibers per cubic centimeter for a 74-minute time period; therefore, the worker must have been subjecte to concentrations greater than the allowable maximum of 10 fibers per cubic centimete

Three samples were taken at the sack fillers breathing zone, (Nos. 5, 6, and 7, Table 1). Unfortunately, sample #7 was too loaded to count accurately. This indicates, however, that there is a good probability that the worker is exposed to greater than the allowable concentration of asbestos fibers. There was a local exhaust system over the sack filling spout, but dust was visibly escaping this system, especially when the sack was automatically kicked off the spout when it was full, and when it landed on the conveyor belt. An effective system should be designed to limit or capture this dust.

One sample was taken at the operation of joint compound sack stacking. A level of 13.7 fibers per cubic centimeter was recorded. This high level is probably due to dust escaping from the sacks as they are put on the stack and from dispersion of dust already on the outside of the sacks.

Control of the excessive asbestos concentrations by engineering methods is required by state and federal law, a copy of which is enclosed. Isolation, enclosure, exhaust ventilation and dust collection must be used to meet the exposure limits. Substitutio of another substance might be the best solution to the asbestos problem.

In the time required to complete engineering controls, a respiratory protection program or shift rotation is required. It appears that the airborne concentration will not exceed ten times the legal limits; so a reusable or single use air purifying respirator approved for protection from airborne contaminants by the Bureau of Mines or the National Institute for Occupational Safety and Health may be used. A respirat program shall be established in accordance with the requirements of the American National Standards Practices for Respiratory Protection, ANSI, Z88.2-1969. Provisions of the standard for protective clothing and change rooms shall be complied with.

The general areas of asbestos handling should be cleaned by vacuum sweeping, if possible. This will limit the asbestos dispersed into the air. Every method possible should be used to control asbestos containing dust. Plastic liners may be used to cover incoming shipments of bulk asbestos. All opening and weighing of the asbestos sacks must be done under local exhaust ventilation. Some handling changes or ventilation improvement is needed at the sack filling and stacking areas to limit of contr dust. Better housekeeping in these areas is needed to prevent dust from accumulating and being reentrained into the air.

Other products packaged include a paint filter containing no asbestos. Efforts should also be made to control dust from these operations. Since these products do contain a fungicide, Tancide, the operators should wear reusable or single use respirators, approved for protection from toxic dusts by the U. S. Bureau of Mines or the National Institute for Occupational Safety and Health. It may be desirable to allow the worker to choose from several approved respirators. Reputable safety equipment suppliers can provide information on approved respirators.

RECOMMENDATIONS

1. Provide working procedures to best utilize dust control equipment, especial in the mixing operations.

2. Provide adequate dust limiting and control equipment in the bag filling and stacking areas.

3. Keep all work areas free from asbestos dust accumulations.

4. Provide a respirator program until engineering controls lower the concentration to acceptable limits.

5. Cover incoming bulk shipments of asbestos to limit spread of the fibers.

Respectfully submitted,

Jerry F. Lauderdale, Assistant Engineer
Industrial Hygiene Program
Division of Occupational Health
and Radiation Control

TABLE 1

Location	Controls In Use
Mixer - placing bags of asbestos and other materials in mixer	Local exhaust booth, respirator, apron, gloves
Mixer	Local exhaust booth, respirator, apron, gloves
Mixer	Local exhaust booth, respirator, apron, gloves
Mixer	Local exhaust booth, respirator, apron, gloves
Joint compound sacker - putting sacks on automatic filling spout	Same local exhaust above filling spout, respirator, apron, gloves
Sacker	Same local exhaust above filling spout, respirator, apron, gloves
Sacker	Same local exhaust above filling spout, respirator, apron, gloves
Joint compound stacker	Respirator, apron, gloves

Sample Time (minutes)	Concentration Fibers/.
11	4.8
74	10.0
22	8.2
20	1.0
15	5.3
33	1.5
58	Too much dust to count sample
21	13.7