

October 29, 1974

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ASBESTOS SUMMARY

Attached is a redraft of your summary report reviewing the current status of asbestos exposures in our plants.

Although your latest draft included a number of suggestions discussed at the meeting of May 31, 1974, additional changes have been incorporated in our rewrite (especially the first several pages) to more clearly define the problem, programs, status and requirements for meeting 1976 criteria.

To expedite the final draft, unless there remain substantial differences in content, we should be able to resolve any further changes by phone following your review.

Also advise if Corporate Engineering has provided or will provide any input for this report, especially in the area of capital expenditures for meeting the lower fiber level requirements.

W. Passuliotis

REVISED DRAFT

DATE October 29, 1974

TO
LOCATION

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FROM
LOCATION

SUBJECT: STATUS REPORT - ASBESTOS EXPOSURES

1. Background

The handling, use and storage of asbestos fibers at a number of GAF plants necessitated the establishment of a comprehensive sampling and monitoring program as a result of federal regulations aimed at limiting employee exposure to this substance. During 1972, this program was directed toward the accumulation of a body of data for the three-fold purpose of attempting to determine the following:

1. The number and identity of job classifications exposed to levels of asbestos above the OSHA established and proposed future threshold limit values.
2. The current levels of asbestos fibers at particular job locations.
3. Engineering controls and capital expenditure requirements to reduce exposures to acceptable limits.

In 1973, the monitoring program was modified and directed towards obtaining time weighted average (TWA) and peak exposure data on a specific list of job classifications which the previous program indicated a potential for excessive exposures. This program required a minimum of three TWA's and three peak readings during the year to establish exposure levels in accordance with regulatory requirements. To aid in this effort, individual locations were provided with sampling equipment and procedural instructions to supplement CEED activities. Unfortunately, the actual total data thus produced fell short by approximately sixty percent of the total number of data points anticipated.

However, the 1973 - 74 and the previous monitoring sampling programs revealed several variables which contribute to the difficulty of placing a precise level on a given job classification. Individual and group work practices, housekeeping efforts, weather and seasonal variations, efficiency of dust collecting and ventilating systems, maintenance practices, employees' physical stature and the particular product being made, all influence fiber exposures. In addition, variations in process equipment, plant layouts and production activity contribute further towards producing varying fiber counts for the same job classifications within similar product group plants.

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Taking into account the above variables and the limited number of replicate samples conducted during the 1973-74 period, an estimate of the nature and intensity of exposure to asbestos can be drawn if all data collected to date is utilized and an assumption is made that samples are representative of the employees' daily, time weighted average and/or peak concentration exposures. These results are being compared with the 5.0 fiber/cc TWA and 10.0 fiber/cc peak exposure limits currently in effect and the 2.0 fiber/cc time weighted average exposure and 10.0 fiber/cc peak to take effect in July, 1976. Current indications are that any revised asbestos standard will not include a lowering of the 1976 threshold limit values.

The attached data sheets summarize the results of the various sampling programs. This data is broken down by group, plant and operation.

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B. Asbestos Cement

1. Status

With reference to table #2, pages 9 and 10, the following points are evident:

- (a) Under current operating conditions, housekeeping and work

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practices and maintenance schedules, the possibility exists that the 10.0 fiber/cc peak ceiling concentration may occasionally be exceeded on the beater decks, during the disposal of scrap, unloading boxcars, and the emptying of dust collectors.

(b) Tests have not shown the current 5.0 fiber/cc time weighted average limit to be exceeded in any of the areas where asbestos cement products are made at St. Louis and South Bound Brook.

(c) If plant conditions remain unaltered, the 2.0 fiber/cc time weighted average exposure limit to be imposed during 1976 may be exceeded on all beater deck job classifications. In addition, the rework handling on the beater deck and boxcar unloading at Mobile could also exceed this fiber limit.

(d) Corrective measures to reduce fiber levels at the saw operation in St. Louis were effective in achieving the fiber limit scheduled to be imposed in 1976.

2. Discussion and Recommendations

The goal in the asbestos cement plants is to consistently achieve less than 2.0 fiber/cc time weighted average exposure on all job classifications on the beater decks and rework handling and to prevent exceeding the peak ceiling concentration of 10.0 fiber/cc on the beater decks, rework handling and boxcar unloading.

The adoption of work practices such as those listed in the Floor Tile and Sheet Flooring section of this report should significantly reduce the potential for exceeding the 10.0 fiber/cc peak exposure limit during the unloading of asbestos fiber and other areas where asbestos is handled.

In order to bring the beater decks into compliance with the standards scheduled for 1976, the following suggestions are submitted:

1. Every effort should be made to clean, by vacuum, the beater decks and the surrounding areas.
2. Work practices concerned with the handling of asbestos should be initiated.
3. All existing dust collecting equipment be placed in design working order.

Following these three prerequisite steps, locations would be resurveyed by CEED to determine the exposure levels achievable with existing equipment. After a thorough evaluation of these results, recommendations for further improvements would be made. Because of physical differences, the three beater decks would have to be treated separately, but the same principles may well apply at all three locations.

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3. Laboratories

(a) South Bound Brook

The operations that have been tested at this laboratory include fiber fluffing, cutting corrugated sheets, and cutting Stratolite siding.

The cutting operations gave results of 20.9, 20.6 and 10.4 fiber/cc on samples taken for 10-12 minutes. Since these values were obtained, a dust collecting system has been installed which should eliminate any problem. Confirming samples have not been taken as yet.

V. General Conclusion

This report contains suggested work practices and improved housekeeping methods. Dust collection systems are also recommended. The implementation of the above will initially lower fiber levels. However, they must be constantly supervised and maintained if we expect to keep asbestos levels below current and future standards. The following practices will help to maintain the regulated levels of asbestos.

1. Each plant should adhere to an annual monitoring schedule for job classifications subject to asbestos exposure.
2. CEED should monitor these same job classifications on an annual basis, calibrate the plant's sampling pumps and insure that their equipment is in proper working order.
3. Plants should establish and maintain a periodic cleaning and maintenance schedule for all dust collecting systems to assure their operation at optimum efficiency.
4. Plants should continue the supervision of accepted work practices and the maintenance of good hygiene conditions in order to minimize and control the effects of any existing dust exposures.