PLAINTIFF'S EXHIBIT K276

OWENS-CORNING FIBERGLAS

intra-company correspondence

to Jon L. Konzen, MD - Toledo 11

from G. E. Devitt - Toledo 11

date February 17, 1971

subject BERLIN PLANT

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On January 26 and 27, 1971, a series of samples were taken inside the plant by the writer. These were to act as a check on engineering work already done, and to aid in further planning, as requested by the plant. They will be compared, where possible, with the results of the previous survey made by Clayton & Associates in June of 1970. A copy of the results of the January, 1971 study is attached.

Since the June 1970 survey, a number of engineering and process changes have been made in the finishing end of the plant, while essentially nothing has been done on the #1 and #2 pouring lines. In addition, the filter press operation has been brought at least partially on line since the June 1970 study.

These samples were checked for two things. The first was the dust concentration, which is reported in milligrams/cubic meter ($mg/M^3$), and would include fibrous material, as well as particulate dust. The sample was also checked for asbestos fibers, with the counts reported in fibers/milliliter of lengths greater than 5 microns, greater than 10 microns, and total. The health threshold of 5 fibers/ml greater than 5 microns is based on the prevention of asbestosis, but no actual limit has been set for the prevention of lung cancer. There is some limited evidence that shorter fibers may be a factor, and this should be kept in mind. Also, no actual exposure rate and dose response has been determined for this real health hazard.

The finishing end of the plant, while the equipment, and especially the FJ saw is operating correctly, as was the case during these sampling periods, appears to have levels which are satisfactory with one exception. The F-1 unloader (in-feeder) still is getting excessive exposures, but corrective work is to be soon completed, with a conveyor extension and a local exhaust rework.

The filter press operation appears well controlled, although under process conditions during the sampling periods, excessive amounts of water are being used, which may have been aiding in control. However, the batch mixer for this area requires better process control ventilation, as well as hood redesign for more efficient operation.

The operations of the #1 and #2 lines are a definite source of a real health exposure to all who work on them. Ventilation controls are badly needed, and the exposures are serious enough to require personal respiratory protection on an interim basis until these controls can be installed. These pouring lines are one of the few areas of this plant where comparable results between the June 1970 study and the January 1971 study can be noted. In both studies, the results are almost identical and show levels well above the recommended threshold values. These results are listed below for comparison purposes:

| | June 1970 Study | | January 1971 Study | |
|---|---|---|---|---|
| Operations | $mg/M^3$ | Fibers/ml | $mg/m^3$ | Fibers/ml |
| #1 Line Service | 7.6 | 1.59 | | |
| | 34.2 | 15.1 | 34.4 | 17.1 |
| #1 Line Pourer | 8.9 | 2.18 | 2.0 | 0.31 |
| #2 Line Stripper | 24.2 | 14.1 | 21.1 | 8.62 |
| | 39.1 | 11.5 | | |
| #2 Line Pourer | 14.2 | 1.54 | 19.2 | 1.66 |

Recommendations

1. The strong need for local control of asbestos and dust on the pouring lines has been reconfirmed.
2. Until such positive engineering controls are installed, a personal protection program for all pouring line employees is required, as well as batch mix operators.
3. The filter press batch mixing ventilation system needs redesign for better control.

If there are any questions or comments, please do not hesitate to contact me.

G. E. Devitt
Chief Industrial Hygienist

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Attachment

ORGE D. CLAYTON & ASSOCI. .S, INC.
INDUSTRIAL HYGIENE FIELD SAMPLING RECORD

Plant Berlin Date 1/27/71

Process By GED

Material(s) As Sampling Method Membrane AA

Remarks (Ventilation, etc.)

| Sample No. | Rotameter Reading | Description of Sample | Start | Stop |
|---|---|---|---|---|
| 5688 | PS 20 1.95 | Asst. batch mixer (1 cycle) | 0855 | 9:20 |
| 89 | PS 17 2.22 | Batch floor - general area - center table | 0852 | 9:32 |
| 90 | PS 19 2.19 | repeat of 5688 (1 cycle) | 9:20 | 9:45 |
| 91 | PS 1 2.37 | ~~follow~~ #2 line power (duct) | 10:32 | 11:22 |
| 92 | PS 13 2.28 | #2 line - stupper oiler | 10:25 | 11:25 |
| 93 | PS 17 2.22 | #1 line power (flat mix) | 10:26 | 11:26 |
| 94 | PS 15 2.19 | #1 line stupper - | 10.37 | 11:27 |
| 95 | PS 20 1.95 | General area - near end #2 line | 10:32 | 11:57 |
| 96 | PS 20 1.95 | Extra Press line [illegible] FP #1 | 1:00 | 2:00 |
| 97 | PS 15 2.19 | FP #3 operator | 1:01 | 2:01 |
| 98 | PS 17 2.22 | F.P batch mixer | 1:03 | 1:48 |
| 99 | — | Blank | | |
| 5700 | — | Destroyed | | |
| 01 | PS 1 2.39 | FP area service driver (left truck | 1:05 | 1:55 |
| 02 | PS 13 2.28 | " " general area - end of conveyor FP #2 | 1:07 | 2:01 |
| 03 | PS 13 2.54 | Dryer service man (left truck) | 2:46 | 3:26 |
| 04 | PS 15 2.19 | F1 Packer (1st man) 1x6x36 [illegible] | 2:42 | 3:02 |
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GEORGE D. CLAYTON & ASSOCIATES, INC.
FIBER SAMPLING SUMMARY

...us Material Asbestos — Plant OCF-BERLIN, NEW JERSEY

| Sample No. | Description | Sampling Period Start | Sampling Period Stop | Sample Weight mg | Sample Volume liters | Concentration mg/M³ | Concentration Fibers/ml >5μ | Concentration Fibers/ml >10μ | Concentration Fibers/ml Tot |
|---|---|---|---|---|---|---|---|---|---|
| 5673 | F-1 Unloader | 08:43 | 09:13 | 1.67 | 73.2 | 22.8 | 3.41 | 3.10 | 5.21 |
| 5675 | F-1 Packer | 08:50 | 09:20 | 0.32 | 65.7 | 4.87 | 2.02 | 1.26 | 3.78 |
| 5676 | F-3 Salt Feeder | 10:15 | 10:30 | 0.04 | 33.3 | 1.20 | 0.91 | 0.50 | 3.51 |
| 5677 | F-3 Pack-Service Man | 10:13 | 10:43 | <0.01 | 73.2 | <0.14 | 0.34 | 0.17 | 0.83 |
| 5678 | F-3 Pack-Service Man | 10:16 | 10:46 | <0.01 | 65.7 | <0.15 | 0.30 | 0.20 | 1.18 |
| 5679 | F-3 Packer | 10:16 | 10:41 | 0.20 | 48.7 | 4.11 | 1.08 | 0.77 | 4.31 |
| 5681 | F-1 General Area | 11:22 | 11:58 | <0.01 | 79.9 | <0.13 | 0.20 | 0.09 | 0.96 |
| 5682 | F-3 General Area | 11:23 | 11:57 | <0.01 | 66.3 | <0.15 | 0.85 | 0.49 | 2.3[illegible] |
| 5683 | General Area-Taping Machine | 11:24 | 12:00 | <0.01 | 87.8 | <0.11 | 0.02 | 0.02 | 0.18 |
| 5684 | F-2 General Area | 11:26 | 11:56 | <0.01 | 65.7 | <0.15 | 0.45 | 0.28 | 1.26 |
| 5686 | General area between #5 and #6 Cylinders | 13:05 | 15:05 | 0.93 | 292.8 | 3.18 | 0.48 | 0.19 | 0.74 |
| 5687 | General area between #11 and #12 Cylinders | 13:07 | 15:07 | 1.07 | 266.4 | 4.02 | 0.46 | 0.20 | 0.68 |
| 5658 | tch Mixer (one cycle) | 08:55 | 09:[illegible] | 0.20 | 48.7 | 4.11 | 3.08 | 1.9 | [illegible].33 |