April 14, 1960

Mr. J.P. Crook
Personnel Manager
Owens-Corning Fiberglass Corp.
Kaylo Division
Berlin, New Jersey

Dear Mr. Crooks:

On March 24, 1960, personnel from this Program collected atmospheric dust samples in your plant. The resulting dust counts are reported in Table I. In general, these show a low dust count, however, several results also indicate that the dust concentrations may approach or somewhat exceed the threshold limit of five millions of particles per cubic foot of air. This limit is recognized for asbestos containing airborne dusts.

The airborne dust is a composite mixture of particles of asbestos, silica and lime, as well as the calcium interaction product referred to by the trade name of kaylo. In order to reduce the in-plant airborne concentration of this dust, the following recommendations are made:

1. General ventilation - Improve the general ventilation of the building to augment the local exhaust ventilation as already installed at many locations along the production machinery.

2. Existing exhaust ventilation system - Service the existing system with respect to enclosure devices, dust loading, and general repair in order to secure the full efficiency of the incorporated design features to collect the dust at local sources of emission.

Note: In a preliminary tour of the plant it was noted that considerable dust escaped at a saw in the flatware finishing line. This condition however was corrected at the time of the above study.

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3. Housekeeping - Clean the floors, particularly along and under the flatware and roundware fabrication lines.

   Note: A considerable amount of bulk or lumpy material accumulated along the production lines. This material will undergo further pulverization on the floor resulting in airborne dust concentrations in the general atmosphere of all plant areas.

4. Exhaust gases from fork lifts - Redirect the exhaust gases from the fork lifts, preferably up and above the lifts. This would overcome the tendency of these gases from blowing dusts from the floors, stacked, or unloaded pallets where some dusty material will accumulate.

5. Respirator program - Continue to use U.S. Bureau of Mines approved type respirators for pneumonoconiosis dust in those locations where dust arises beyond the effective control of the local exhaust ventilation system. This refers to several intermittent operations such as loading or unloading, and charging the materials from cars, lifts, and into mixing hoppers.

Thank you for your attention to this matter.

Very truly yours,

E. Lynn Schall
Chief
Occupational Health Program

cc: Dr. Warren Redner

att.
fbk/jwp

Owens-Corning Fiberglass Corporation
Kaylo Division
Berlin, New Jersey

Results of an atmospheric study conducted in the above plant on March 24, 1960

Table I - Dust Concentrations

| Sample Number | Location and Remarks | Dust Count m.p.p.c.f.* |
|---|---|---|
| F13867 | Batch floor, mixing a composition of asbestos, sand and lime by dumping bags of material into hoppers | 2.9 |
| F13868 | Repeat of above sample number F13067 | 2.7 |
| F13869 | Repeat of above sample number F13867 | 3.74 |
| F13870 | Repeat of above sample number F13867 | 8.78 |
| F13871 | Repeat of above sample number F14067 | 0.6 |
| F13872 | Repeat of above sample number F13067 | 2.0 |
| F13873 | Molded pipe covering line. Stripping molded covering from mold | 4.65 |
| F13874 | Roundware line 2. Pouring wet composition into molds | 0.46 |
| F13875 | Repeat of sample number F13074 | 0.64 |
| F13876 | Flatware line. Feeder end | 7.28 |
| F13877 | Repeat of sample number F13876 | 6.46 |
| F13878 | Slip saw operator. Kaylo molded material | 0.69 |
| F13879 | Packing. Finished Kaylo material | 3.56 |
| F13880 | Repeat of sample number F13879 | 8.14 |
| F13881 | Flatware stripping station, No. 1 line | 0.81 |
| F13882 | Repeat of sample number F13881 | 0.10 |

Owens-Corning Fiberglass Corp.
Berlin, New Jersey

Table 1

Note: m.p.p.c.f. means millions of particles of dust per cubic foot of air. The dust originated while mixing and fabricating a Kaylo product consisting of asbestos, silica and lime.

The threshold limit values for asbestos, silica, and lime dust are generally accepted to be as follows for a daily 8-hour exposure:

| | | |
|---|---|---|
| asbestos | 5.0 | m.p.p.c.f. |
| silica | | |
| high (above 50% free silica) | 5.0 | m.p.p.c.f. |
| medium (5 to 50% free silica) | 20. | m.p.p.c.f. |
| low (below 5% free silica) | 50. | m.p.p.c.f. |
| lime (nuisance, no silica) | 50. | m.p.p.c.f. |

5-12-C

DUST COUNT —— WORKSHEET

State of New Jersey Department of Health
BUREAU OF ADULT & OCCUPATIONAL HEALTH, TRENTON, N. J.

Plant name Owens Corning Fiberglass
and address Berlin N J

Method: (X) MICROSCOPE L.F. at 100 X magnification
( ) MICROPROJECTOR at ___ X magnification

Date counts made Tues. March 29, 1960 Counted by: Taylor & Rochnak

| Number: FIELD / Number: TUBE | B 8(dp) | A 9(dp) | X 7(?)(dp) | 15(K) | 14(K) | 4(K)? | K(K) | K2(K) | 13(K) | Control (1) | Con. (Repeat) (2) | CONTROL Con. (3) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sampling Location and Operation | Picking 10 min | Stripping Fiber Line 10 min | Picking 10 min | Bottle Floor Mixing 11 min | Bottle Floor Mixing 10 min | Stripping M.P.C. 10 min | Stripping M.P.C. 6 min | Flatware Feeder 10 min | Flatware Feeder 10 min | | | |
| Counts 1 | 48 | 12 | 46 | 47 | 62 | 12 | 18 | 66 | 99 | 36 | 34 | 6 |
| 2 | 27 | 20 | 59 | 48 | 64 | 3 | 27 | 57 | 82 | 45 | 32 | 7 |
| 3 | 24 | 13 | 75 | 39 | 83 | 2 | 24 | 63 | 73 | 48 | 34 | 5 |
| 4 | 51 | 18 | 62 | 36 | 85 | 2 | 33 | 73 | 81 | 36 | " | 3 |
| 5 | 36 | 22 | 71 | 32 | 107 | 3 | 33 | 78 | 71 | 37 | " | 5 |
| 6 | 32 | 16 | 75 | 49 | 89 | 11 | 23 | 68 | 94 | 36 | " | 6 |
| 7 | 39 | 19 | 55 | 40 | 81 | 6 | 15 | 59 | 80 | 43 | " | 13 |
| 8 | 37 | 14 | 73 | 38 | 76 | 4 | 18 | 76 | 78 | 44 | " | 11 |
| 9 | 48 | 16 | 84 | 43 | 87 | 5 | 27 | 70 | 85 | 37 | " | 11 |
| 10 | 34 | 6 | 74 | 51 | 77 | 6 | 34 | 75 | 49 | 43 | " | 12 |
| Total | 376 | 147 | 674 | 422 | 811 | 54 | 252 | 685 | 792 | | | 79 |
| AVERAGE | 37.6 | 14.7 | 67.4 | 42.2 | 81.1 | 5.4 | 25.2 | 68.5 | 79.2 | | | 7.9 |
| Control (Minus) | 7.9 | 7.9 | 7.9 | 7.9 | 7.9 | 7.9 | 7.9 | 7.9 | 7.9 | | | |
| NET | 29.7 | 6.8 | 59.5 | 34.3 | 73.2 | — | 17.3 | 60.6 | 71.3 | | | |
| Calculate to M.P.P.C.F. | 3.56 | .816 | 8.14 | 3.74 | 8.78 | | 4.46 | 7.27 | 6.46 | | | |

5-12-C DUST COUNT —— WORKSHEET

State of New Jersey Department of Health
BUREAU OF ADULT & OCCUPATIONAL HEALTH, TRENTON, N. J.

Plant name and address Owens Corning Fiberglas, Edison, N. J.

Method: (X) MICROSCOPE L.F. at 100 X magnification
( ) MICROPROJECTOR at ____ X magnification

Date counts made Thursday March 25, 1960 Counted by: Taylor and Parkhurst

| Number: FIELD / Number: TUBE | 1 (JT) | C (JT) | JT (JT) | T-2 (JT) | B1 (JT) | T-1 (JT) | D4 (BE) | R (BE) | 2 (BE) | CT (BE) | CONTROL |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sampling Location and Operation | Post Plant Point 1 | Back Flow mixing | Packing | Inspection | Slitting Operation | Fiberglass Storage Area 1 | Back Flow mixing | Packing Area 2 | Back Flow mixing | Post Plant Point 2 | |
| | 10 min. | 10 min. | 10 min. | 10 min. | 10 min. | 10 min. | 10 min. | 10 min. | 7 min. | 8 min. | |
| Counts 1 | 34 | 22 | 5 | 4 | 16 | 12 | 34 | 8 | 9 | 6 | |
| 2 | 24 | 11 | 8 | 12 | 18 | 5 | 30 | 13 | 5 | 11 | |
| 3 | 30 | 22 | 6 | 5 | 8 | 5 | 29 | 11 | 12 | 9 | |
| 4 | 27 | 13 | 3 | 7 | 12 | 12 | 31 | 6 | 8 | 13 | |
| 5 | 31 | 10 | 4 | 2 | 17 | 5 | 21 | 10 | 20 | 17 | |
| 6 | 26 | 14 | 5 | | 10 | 10 | 33 | 9 | 35 | 8 | |
| 7 | 28 | 7 | 1 | | 10 | 12 | 30 | 13 | 30 | 11 | |
| 8 | 40 | 14 | 3 | | 9 | 9 | 26 | 16 | 29 | 23 | |
| 9 | 19 | 5 | 1 | | 23 | 11 | 33 | 9 | 30 | 11 | |
| 10 | 32 | 7 | 2 | | 15 | 7 | 35 | 32 | 22 | 9 | |
| Total | 322 | 129 | 39 | 30 | 138 | 87 | 307 | 117 | 197 | 122 | |
| AVERAGE | 32.2 | 12.9 | 4.9 | 6.0 | 13.8 | 8.7 | 30.7 | 11.7 | 19.7 | 12.2 | |
| Control (Minus) | 7.9 | 7.9 | 7.9 | 7.9 | 7.9 | 7.9 | 7.9 | 7.9 | 7.9 | 7.9 | |
| NET | 24.3 | 5.0 | — | — | 5.8 | .8 | 22.8 | 3.8 | 11.8 | 4.3 | |
| Calculate to M.P.P.C.F. | 2.9 | .6 | — | — | .69 | .096 | 2.73 | .46 | 2.02 | .64 | |

Plant Owens-Corning