



STATE OF OHIO
THE INDUSTRIAL COMMISSION OF OHIO
DIVISION OF SAFETY AND HYGIENE
2325 WEST FIFTH AVENUE
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COLUMBUS, OHIO 43216

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PLAINTIFF'S EXHIBIT

K-1907

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Superintendent

JUN 09 1975

Re: Owens-Corning Fiberglas Corporation
Case Avenue
Newark, Ohio 43055

Risk # SI 3001

1. On February 13, 1975, a visit was made to the above company to investigate possible health hazards in the pipe insulation department and other locations. This visit had been requested by the company.
2. Those contacted were:
 - Mr. J. Nicholas Foster, Safety Director
 - Mr. Gerald E. Devitt, Chief Industrial Hygienist, Toledo
 - Mr. Robert J. Chenet, Production Manager
 - Mr. Ronald L. Celnar, Personnel Assistant
 - Mr. Charles Woolard, Shift Supervisor
 - Mr. Russell Wince, Steward, Local 244, Glass Bottle Blowers of America (GBBA)
 - Mr. Wilbur McKee, President, Local 244, GBBA
 - Mr Joseph Antle, Chairman, Safety Committee, Local 244, GBBA
3. The company manufactures glass fiber products, including pipe and duct insulation, ceiling board, air filters, and insulation materials.
4. The measurements made are listed in Table 1. The methods used were:
 - A. Type AA cellulose ester membrane filters in a holder with open face to sample the total dust, with MSA personal sampling pumps. The Threshold Limit Value (TLV) for nuisance particulates, based on total dust, is 10 milligrams for nuisance particulates, based on total dust, is 10 milligrams per cubic meter (mg/M^3). The filter holder is clipped to the collar of an operator to obtain samples from the breathing zone.
 - B. A GCA Model 101-1 Respirable Dust Monitor. This measures a collected dust deposit by its attenuation of beta-rays produced by a carbon-14 source. It can be used both with and without a separating cyclone to indicate respirable or total dust in mg/M^3 . The TLV for the respirable portion of nuisance particulates is 5 mg/M^3 .

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4. C. Cont.

Dust counts from samples collected in midjet liquid impingers. The TLV for this method is 30 million particles per cubic foot (mppcf).

5. Pipe insulation is trimmed to final dimensions in power saws. These are equipped with hoods connected to exhaust ducts. The company wishes to find whether there would be a significant increase in dust concentration in the air when hoods at the machines were not connected to the exhaust system. In the first measurement series, these were disconnected at the end trim, batt slit, and wrap saws of the #2 and #3 presses. The hoods were connected during the second series. As indicated by the tabulated data, there was little difference, and dust levels were well below the TLV's in both cases.
6. Measurements were also made with the GCA monitor at the marble batch operation, the F-3 mat line, and the main batch house. The only significant amounts of dust were in the main batch house, particularly at the east end. All were below the TLV of 10 mg/M³ for total dust as nuisance particulates containing no free crystalline silica. However, if materials used in the main batch house include silica flour, which is of the crystalline form, a lower TLV would apply. Where there is free silica (SiO₂) in the dust, the TLV's are computed from the following formulae:

$$\text{Respirable dust: TLV} = \frac{10}{\% \text{ SiO}_2 + 2} \quad \text{mg/M}^3$$

$$\text{Total dust: TLV} = \frac{30}{\% \text{ SiO}_2 + 3} \quad \text{mg/M}^3$$

Free silica contents of dust samples taken in the batch house by this Division were 43% and 75% in 1957 and 66% in 1960. It is suggested that more detailed measurements in the main batch house would be useful for assurance that TLV's are not exceeded.

7. Threshold Limit Values (TLV's) 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 effects. Because of wide variations in individual susceptibility, exposure of an individual at or below current TLV's may not prevent discomfort, aggravation of pre-existing conditions, or an occupational illness. Many TLV's are based on acute exposures and do not necessarily represent prolonged exposures after many years of working.
8. This investigation was made in accordance with IC-5, Specific Safety Requirements of The Industrial Commission of Ohio Relating to All Workshops and Factories.
9. There are no specific recommendations at this time. 4/

Respectfully submitted,

Robert W. Hursh
Robert W. Hursh, P.E.
Industrial Hygiene Engineer

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Measurements at Owens-Corning Fiberglas Corporation, Newark, Ohio February 13, 1975

LOCATION	EVALUATION OF	EVALUATION MEANS	READING	TLV
<u>Pipe Insulation Dept. Local Exhaust Ventilation Disconnected at End Trim, Batt Slit, Wrap Saws of #2 and #3 Presses.</u>				
#2 Sawyer, John Owens	Nuisance particulates	Personal sampling pump and Type AA 37 mm membrane filter, open face.	1.74 mg/M3	10 mg/M3
		GCA Respirable dust Monitor - Total	0.4, 0.5, 1.3, 0.5 mg/M3	10 mg/M3
		Respirable	0.6, 0.1 mg/M3	5 mg/M3
		Midget Liquid Impinger	0.45 mppcf	30 mppcf
#3 Sawyer, John Dumolt	Nuisance particulates	Personal Sampling pump and Type AA 37 mm membrane filter, open face.	0.48 mg/M3	10 mg/M3
		GCA Respirable Dust Monitor - Total	1.3, 0.4 mg/M3	10 mg/M3
		Respirable	0, 0.2 mg/M3	5 mg/M3
		Midget Liquid Impinger	0.15 mppcf	30 mppcf
<u>Same Locations in Pipe Insulation Dept. Local Exhaust Ventilation Connected and Operating.</u>				
#2 Sawyer, John Owens	Nuisance particulates	Personal sampling pump and Type AA 37 mm membrane filter, open face	0.69 mg/M3	10 mg/M3
		GCA Respirable Dust Monitor - Total	1.2 mg/M3	10 mg/M3
		Respirable	0.6 mg/M3	5 mg/M3
		Midget Liquid Impinger	0.14 mppcf	30 mppcf
#3 Sawyer, John Dumolt	Nuisance particulates	Personal sampling pump and Type AA 37 mm membrane filter, open face	0.64 mg/M3	10 mg/M3
		GCA Respirable Dust Monitor - Total	0.5 mg/M3	10 mg/M3
		Respirable	0, 0.4 mg/M3	5 mg/M3
		Midget Liquid Imp. var	0.38 mppcf	30 mppcf
Other Areas				
Marble Batch operation	SAME	GCA Respirable Dust Monitor Respirable	0	5 mg/M3

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Location	Evaluation of	Evaluation Means	Reading	TLV
Other Areas				
F-3 mat line, second spray booth	Nuisance Particulates	GCA Respirable Dust Monitor Respirable	0	5 mg/M3
Main batch house, east end	Nuisance Particulates	GCA Respirable Dust Monitor Total	6.4 mg/M3	10 mg/M3
Main batch house, mixer at NW corner	Nuisance Particulates	GCA Respirable Dust Monitor Total	2.2 mg/M3	10 mg/M3

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