PLAINTIFF'S EXHIBIT

K-2024

The Industrial Commission
Of Ohio
Division Of Safety & Hygiene
246 N. High St. Col. O. 43215

December 6, 1982

Legal Section
Industrial Commission of Ohio
246 North High Street
Columbus, Ohio 43215

Re: OD 19266-22
Chester Bates
Owens-Illinois
Columbus, Ohio 43207

Attention: Judy Spencer

Dear Ms Spencer:

On September 21, 1982, a visit was made by Robert Crackel to Owens-Illinois, 711 Southwood Avenue, Columbus, Ohio 43207. The purpose was to collect industrial hygiene data relative to the occupational disease claim of Chester Bates, OD 19266-22. Mr. Bates reportedly developed lung disease as a result of 27 years of exposure to glass and silica dust as well as hydrofluoric acid.

The company manufactures television picture tubes. A complete service record for the claimant at Owens-Illinois was provided (see attachment.) The company's first aid records showed the claimant had numerous headaches and colds over the years as well as recurrent tonsillitis.

According to the company, Mr. Bates worst exposures would have been as a set-up worker and as a grinder. In this area rough tube edges are ground, moved to be washed, moved to the acid bath to further smooth them, rinsed, and moved for final washing. Set-up workers adjust machines for ware (size) changes and drain and refill the acid tanks occasionally.

The acid tanks are filled with a mixture of hydrofluoric and sulfuric acids. The tanks are vented with three-sided canopy-type hoods. Visible fumes appear to be captured. A set-up worker only stays around the acid tanks for routine maintenance and to correct problems on the line.

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Grinders place the TV funnel tubes on a large, automatic garnet grinding wheel and then replace them on the automatic line to move to washing and the acid tank. The grinding job is a wet process, and although there was a moderate amount of slurry around the machine, the amount of dust around the machines appeared to be negligible.

Air sampling was done in both the grinding and the acid areas and on workers in both areas. The results are listed in Table 1. Because the amount of respirable dust collected was so low, no acceptable safe limit (TLV) could be calculated. However, if even the high estimate of 20% free silica is used, the safe limit would be well above the claimant's exposure. Given the nature of the process and the low weight gain, it is felt that the dust exposure posed no hazard.

Tests for fluorides were far below the TLV adopted by the American Conference of Governmental Industrial Hygienists. Also, sampling for hydrogen fluoride (gas) throughout the day showed no gas escaping from the hood. These test results are consistent with results obtained in February 1958 by this agency at the company's request. Those data showed HF concentrations below 1 ppm when the ventilation was operating.

Threshold Limit Values 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 effect. Because of wide variations in individual susceptibility, however, a small percentage of workers may experience discomfort from some substances at concentrations at or below the threshold limit; a smaller percentage may be affected more seriously by aggravation of a pre-existing condition or by development of an occupational illness. The TLV-TWA should be used as guides in the control of health hazards and should not be used as fine lines between safe and dangerous concentrations.

In summary, no probable work-related cause for the claimant's condition was found during this investigation.

Respectfully submitted,

Robert J. Crackel

Robert J. Crackel
Industrial Hygienist

RJC:gjb

Attachments: 1 Table
OI Service Record

Owens-Illinois

TABLE 1

Date	Name	Job/Operation	Contaminant	Exposure TWA	ACGIH TLV
10-26-82	Vicky Burcham	Flat-Mill Loader (Grinder)	Respirable Dust	0.3 mg/M^3	Insufficient wt. to determine % Silica.
	James Conley	Set-Up, #2 Line	Fluorides	0.03 ppm	3 ppm, as F
	Flat Mill Area	Machine #3	Total Dust	0.21 mg/M^3	NA
	Near Acid Bath	Line 4	Fluorides	0.06 ppm	NA
	At Acid Bath	Line 4	Hydrogen Fluoride (Gas)	N.D., 3 samples during day	NA

TWA	Time Weighted Average
TLV	Threshold Limit Value
ACGIH	American Conference of Governmental Industrial Hygienists
*	Occupational Safety and Health Administration (OSHA) permissible exposure limit (PEL)
**	National Institute for Occupational Safety and Health (NIOSH) TLV
ppm	Parts per million parts of air
mg/M^3	Milligrams per cubic meter of air
dBA	decibels A scale
ND	None Detected
(STEL)	Short Term Exposure Limit
NA	Not Applicable