



THE INDUSTRIAL
COMMISSION OF OHIO

Richard F. Celeste
Governor

50 Old Village Road, Suite 110
Columbus, Ohio 43228

July 14, 1988

PLAINTIFF'S EXHIBIT

K-2010

Ms. Judy Spencer
Legal Department
Industrial Commission of Ohio
35 E. Chestnut Street, 6th Floor
Columbus, Ohio 43215

RE: OD 31590-22
Robert M. Hetrick
Owens Corning Fiberglas Corp.
Newark, OH 43055

Dear Ms. Spencer:

On May 3, 1988, an unannounced visit was made to Owens Corning Fiberglas (OCF), Newark, Ohio, to investigate the occupational disease claim of Robert M. Hetrick. The claimant alleges contracting the disease chronic bronchitis (small airway obstructive disease) from working as a water reclaim operator (1982-1987) at OCF. He further alleges continued breathing difficulties in his current position as a wool packer due to fiberglas and "general dust".

Contacted at the company were Mr. Tom Mullady, Safety Supervisor, and Mr. Jim Zigan, Mr Hetrick's first shift supervisor while in the water reclaim area. The claimant worked rotating shifts.

The work history listed in the claim file indicates some potentially dusty operations in companies previously employing the claimant, (such as rope maker, building demolition, and crane operator on a sand and gravel drag line.)

The following dates were obtained from the OCF company records:

8-20-69	Date of Hire
6-4-70	Service date (actually started working for OCF)
82-87	Worked in water reclaim area until process was shut down July, 1987
87-present	Works in wool packing as a wool plant selector/packer.

Mr. Zigan described the job duties of water reclaim operator as follows:

1. Check baghouse. At the maximum, he would have to change a bag once per shift which took 15 to 20 minutes. Part of this time was spent outside. The baghouse dust, according to Mr. Mullady, has not been analyzed, but after its collection from a glass batch oven could contain crystalline silica, lime, soda ash, "as well as other chemicals." Respirator usage was required when changing a bag. (Refer to "Respirator Usage" section of this report.)

2. Process P-80 water and check pH. P-80 is a process for treating glass wool with chemical binders. The wash water could contain dilute phenol, formaldehyde, and ammonia.

Dilute 500 gallons of P-80 water at a time, three to seven times daily (four times as an average) up to 1000 gallons. Add ten to twenty pounds of lime per 1000 gallon mix using a hand scoop. No respirator was required. Lime dust exposure would have been limited to a few seconds per 1000 gallon mix.

3. Maintain shaker screens, watch pit pumps. Majority of time was spent watching monitor board.

4. Add diatomaceous earth (DE) to form a caked vacuum filter. Five 80 pound bags would be used per filter on an average of once per shift (at most, twice per shift and sometimes not done at all.) It took 10 to 15 minutes per filter. DE exposure was not too dusty, according to Mr. Zigan. Respirator usage was required for this operation.

The employer disagrees with several allegations of the claimant which appear in the claim file:

1. In water reclaim, according to the claimant, lime and DE dust were "all over the place"; and P-80 "fumes were everywhere." Mr. Zigan said that this was not the case. Unfortunately, the water reclaim operator's exposure was never monitored, except for one dust sample collected in the baghouse. Since the constituents of the dust, and particularly the silica content, are unknown, the result cannot be compared to a nuisance particulate standard as it was (see Enclosure 1A). No sample results were found in the Division of Safety and Hygiene's files nor from the Occupational Safety and Health Administration for exposures in the water reclaim area and baghouse. Paragraph 5a of Enclosure 1B states that low exposure levels for respirable free crystalline silica (cristobalite) were measured in 1986 on a DE addition operation identical to Mr. Hetrick's work area. (Refer to 1B and 1F.) The water reclaim operation where the claimant worked has been shut down since July, 1987.

2. The claimant stated "...if we got behind, there was a holding tank that the P-80 binder water was pumped into and it was an open tank, and the fumes were everywhere." Mr. Zigan stated that the holding tank was not constantly used because the P-80 chemicals would form a gummy substance. Most operators left

the holding tank open in order to see inside. Per Mr. Mullady's letter (Enclosure 1B), there was "occasionally a low odor level" of ammonia.

3. Concerning the claimant's statement, "I did these job duties" (i.e., involving dust and fume exposure) "eight hours a day for five days per week." Mr. Zigan said that the majority of the operator's time was spent watching an electronic monitoring board.

4. Per the application, Mr. Hetrick stated that the water reclaim and baghouse buildings were improperly ventilated. Mr. Mullady stated that the two story water reclaim building had two 12' X 14' overhead doors and upstairs double swinging doors for dilution ventilation. The building also had two roof fans. In approximately 1984 or 1985, two 36 inch wall fans were installed. For a further discussion of ventilation refer to the first paragraph on the last page of Enclosure 1A, a letter from the OCF staff industrial hygienist.

Respirator Usage

A copy of the OCF written respirator program is presented as Enclosure 1D. In reviewing the claimant's medical files (1E), medical clearance was given to the claimant to wear a respirator at least once (March, 1982.) Mr. Mullady stated that 3M 8710 NIOSH-approved respirators were worn for adding DE or changing a bag in the baghouse.

Possible Exposures

Enclosures 1A and 1B list the possible exposures. Low levels of the irritant gasses and vapors (ammonia, formaldehyde, and phenol) could have occurred according to Mr. Mullady. Also exposure to various dusts, as listed on page 1 of Enclosure 1B, would have been for brief periods of time, again according to Mr. Mullady. Respirator usage was required when handling all of the solid chemicals except for lime (calcium hydroxide). As previously stated, very little data is available on the dust exposure levels at the claimant's work areas.

According to the material safety data sheets (1C):

Lime (chronic exposure) can cause "bronchial irritation with chronic cough"; and "frequent attacks of bronchial pneumonia are common." Quicklime depends on percent lime and percent free crystalline silica.

Diatomaceous earth may contain up to 60% cristobalite crystalline silica. The Permissible Exposure Limit is listed as 0.08 mg/M³ respirable cristobalite. The Threshold Limit Value is 0.05 mg/M³ respirable cristobalite (see Enclosure 1F.) With acute exposure DE is listed as a "transitory respiratory irritant". Chronic exposure (long term, unprotected, and excessive) may cause silicosis.

Soda ash is listed as an irritant to the upper respiratory tract and mucous membranes.

Crystalline silica exposure (long term, unprotected, and excessive) may cause silicosis.

Ulexite has an unknown chronic effect, but is listed as a mild respiratory tract irritant at high dust concentrations. A nuisance dust.

Sodium sulfate dust can cause irritation to the respiratory passages.

Nepheline syenite according to the material safety data sheet contains no free silica nor asbestos and is listed as a nuisance dust.

Barium sulfate is also listed as a nuisance dust, (refer to MSDS for excessive concentration effects.)

Personal Smoking History

From the medical files supplied by the company, the claimant smoked from one to one and a half packs of cigarettes per day for approximately 32 years. As can be seen from the literature supplied in Enclosure 2, cigarette smoking is the major cause of chronic bronchitis, although dust and fumes can contribute to its onset. Patty's Industrial Hygiene and Toxicology (Volume 1, Third Revised Edition, 1978, pp. 193-194) states:

"Common bronchitis... is a common condition in males after the age of 30... The prevalence among adult men may be as high as 15 to 20 percent. By far the most potent factor, though not the only one causing or aggravating this disease, is cigarette smoking... What seems likely is that the powerful effect of cigarette smoking, the influence of social class with respect to place of residence, medical care, and so on, and general air pollution, overshadow any demonstrable strong influence of industrial dust, fumes, or gasses. In studies in which these factors are corrected for, there is some suggestion that occupational dust per se may contribute at least to chronic bronchitis, even though it is not the most potent factor."

Medical History - Pre-employment

On the claimant's pre-employment physical is stated "No active pulmonary interthoracic disease", and "normal lung x-ray".

Summary

The claimant worked at several potentially dusty jobs prior to working for OCF. The limited data available from the company (which conflicts with the claimant's description of dusty conditions) cannot be used to substantiate nor disprove a claim of chronic bronchitis. The literature does indicate that a long smoking history (such as the claimant's) is a definite factor in the onset of chronic bronchitis.

Respectfully submitted,

Beth Purcell

Beth Purcell
Industrial Hygienist

BP/eg

Enclosures:

1. Information supplied by OCF including material safety data sheets, medical records, and monitoring data.
2. Seven excerpts concerning bronchitis and smoking.