

55th
All-Ohio Safety Congress & Exhibit
April 2-4, 1985

Cincinnati Convention Center
Cincinnati, Ohio

IN SAFETY AND HEALTH

February 5, 1985

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

RE: OD-20000-22
Wylman Johnson
U.S. Steel Corporation

Attention: Ms. Judy Spencer

Dear Ms. Spencer:

On November 5, 1984, the U.S. Steel Corporation, Lorain, was visited to gather information on the above claim. Don Girolkmo, Manager, Personnel Safety and Health, was interviewed.

The claimant's medical background is per the facsimile file. Fairly heavy smoking was noted in the August 9, 1982, hospital admitting diagnosis (one pack per day).

The claimant's work history is from U.S. Steel and the facsimile file.

4 to 9, 1947	Pittsburgh and Lake Erie Railroad - Laborer
1947-1955	Worked coal mine for five years
1955-1982	U.S. Steel, Lorain - various jobs, see facsimile.

U.S. Steel

The claimant had various jobs at the Lorain facility.

Most jobs involved the foundry which is permanently closed. The open hearth is also permanently closed.

The majority of the claimant's work at U.S. Steel was ingot mold chipping. By using a pneumatic chipping hammer, the sand lining of the mold was removed. The sand kept the molten steel from the mold. The cooled ingots were removed and an employee crawled into the mold and removed the sand lining.

The Lorain operation is markedly different now as compared to the claimant's work history. This would not allow a recreation of the claimant's job or exposure picture.

Some prior Commission occupational disease investigations and sampling information from U.S. Steel were obtained. The claimant and other ingot mold chippers exposures are on the enclosed table.

The exposure data indicate elevated levels of respirable dust containing crystalline silica. The company required respiratory protection after 1973.

Prior to 1973, unprotected exposures to elevated levels of silica laden dust is reasonable. The 18 years prior to U.S. Steel's respiratory protection program, the claimant was exposed to elevated levels of silica dust.

Health Effects (crystalline silica)

Classical silicosis is a chronic disease characterized by formation of scattered rounded silica containing nodules of scar tissue. Continued exposure to crystalline silica can produce complicated silicoses. This can lead to respiratory disability even after exposure ceases. The scar tissue cannot function as normal lung tissue (transmit gases).

Coal Mines

The claimant could have been exposed to unknown concentrations of coal dust. The probability of developing pneumoconiosis from coal dust is a function of the exposure concentration and quartz content. Both of these factors are unknown as the specific relation to the claimant's condition and coal dust would be speculation.

Reports of coal dust exposures and lung carcinoma are contradictory. Scarano et al. (1972) found an excess of lung cancer deaths in the U.S. anthracite mines. Rook et al. (1979) studied Lancashire mines and concluded there was no positive association of carcinoma of the lung and pneumoconiosis.²

Conclusions

Considering individual susceptibility, a cause-and-effect relation to silica exposures and the silicosis diagnosis is reasonable. Adenocarcinoma and pure work exposures are suspect as a good cause and effect.

Respectfully submitted,

Richard Wilder

Richard Wilder
Industrial Hygienist

RW/klp

¹Documentation of TLV's, ACGIH, 1983.

²Industrial Toxicology, Hamilton and Hardy, 1983.

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