PLAINTIFF'S
EXHIBIT
BRK-127

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

May 6, 1985

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

RE: O.D. 22212-22
Kathleen Coleman
Inland Div. of GMC
Vandalia, Ohio

Dear Ms. Spencer:

Visits were made to the Vandalia Plant on November 8, 1984 and January 14, 1985, to gather information on the above claim. Thomas Jelenek, Sr. Industrial Hygienist at Inland was interviewed.

The claimant is diagnosed as recurrent bronchitis due to fumes at work.

The claimant's work history, from the facsimile file and Inland, is as follows 1968-1984 Inland, Vandalia, Ohio:

Present job - Packing ball joints
1968-1984 - Dept. 776 - Instrumental Panel Foaming
1966-1968 - Inland Dayton - car weather strip foaming
ice tray and steering wheel mold.
Prior to 1966 - Housewife and short time at a pizza parlor.

The claimant's medical history from 1978 to present involves bronchitis, wrist ganglion and an anxiety state. 1977 and earlier medical history is not in the facsimile file.

The claimant's work at Inland involved work around the instrument panel foaming operation. The panel plastic frames are inserted in the molds after a robot sprays a release wax in the mold. As the mold moves along the circular track another robot meters the foaming material into the mold. A thin plastic sheet is layed over the open mold and then the top is closed. The mold moves to an oven for final set and cure. The mold exits the oven, is opened, pad removed and mold inspected.

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Small amounts of the mold release wax may be brushed during the inspection but the majority is applied by the robots. The wax is at room temperatures. The wax used to be hand sprayed prior to robots but was never heated.

The foaming agent used in the dash panels is Methylene Bisphenyl Isocyante (MDI). The foaming agent used elsewhere in the plant (seat foamers) is Toluene-2,4-Diisocyanate (TDI).

Sampling, to establish claimant's exposures, would be of no value. The operations, equipment, ventilation and employment level are markedly different today than during the claimant's sixteen years at Inland.

There were many air contaminant surveys performed at the Vandalia, Inland Plant. These tests by GM, were reviewed by this author. These results from 1978 and 1979 showed trace amounts of TDI and MDI at areas occupied by the claimant. Amines will also be discussed.

TDI HEALTH EFFECTS[1]

TDI is a major respiratory irritant. TDI can cause skin inflammation, smarting and burning of the eyes. Abdominal distress, nausea and vomiting are also symptoms.

While the nature of human response to TDI vapor is well known, the exposure concentrations causing the response are not well understood. Analytical imprecision and the inability to separate the effects of peaks and excursions from average concentrations, makes interpretation difficult.

Repeated exposures at lower concentrations may produce a chronic-like syndrome in many people. Coughing, wheezing, chest tightness and shortness of breath are related to hypersensitization.

If sensitization does occur, it may be from a single exposure or exposures to days, months or years.

The nature of sensitization process is unknown and is frequently referred to as an allergy. Respiratory sensitivity and response are a true asthma.

MDI HEALTH EFFECTS[1]

Since MDI is closely related to TDI, its health hazard implications are the same; sensitization and irritation of the respiratory tract.

AMINES[2]

In some factories using MDI, there were respiratory irritation when isocyanates were less than a 0.0001 ppm. This was in conjunction to blurred vision with blue haze or fog around lights. Bronchial reactivity are common amine induced delayed mucosal responses.

The only hitch in an amine implication, to the claimant's condition, is that Mr. Jelenek provided information stating no free amines can exist. This was from the TDI, MDI supplier, but is from 1978.

The amine, noted in the survey report, triethylene diamine is a catalyst, during the TDI relation.[3] Triethylene diamine is not used up in the TDI reaction and could be released into the air if the foam is degraded. The degradation could come from improper mixtures, unregulated ovens or welding torches during repairs.

CONCLUSIONS

The claimant's symptoms and the potential exposures to isocyantes and amines suggest a strong cause and effect relationship.

Sincerely,

Richard Wilder

Richard Wilder
Industrial Hygienist

RW:ceg

[1]Documentation of TLV's 1983 American Conference of Governmental Industrial Hygienists.
[2]British Journal of Industrial Medicine 1983, Amines, possible causitive agent in the development of bronchial hyper-reactivity in workers manufaturing polyurethanes from isocyanats.
[3]Condensed Chemical Dictionary 10th Edition, 1981.

CERTIFICATE OF AUTHENTICITY

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William D. Kaye
Supervisor, Microfilming Unit

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