



THE INDUSTRIAL
COMMISSION OF OHIO

Richard F. Celeste
Governor

DIVISION OF SAFETY AND HYGIENE

8120 Washington Village Drive
Dayton, Ohio 45458

PLAINTIFF'S
EXHIBIT
BRK-246

February 16, 1990

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

RE: OD#984658-22
Cynthia Chadwell vs.
General Motors Corporation
Moraine Assembly Plant

ATTN: Judy Spencer

Dear Ms. Spencer:

On February 5, 1990, I visited the General Motors Corporation, Moraine Assembly Plant, Truck and Bus Group, to investigate the facts surrounding the Occupational Disease claim #984658-22. The claimant, Ms. Cynthia Chadwell, has filed with the Industrial Commission of Ohio alleging that her present physical condition is the result of workplace exposure to hydraulic fluid. Ms. Chadwell has been diagnosed by several physicians (reports are in the facsimile file) as an atopic individual suffering allergic reactions when exposed to variety of antigens. Dr. Arthur Gardikes has diagnosed that Ms. Chadwell is allergic to materials in her workplace and that "her exposure to the hydraulic fluid in her line of work created the hypersensitivity situation which has prevented her from working or more specifically from continued exposure to these specific chemicals (*which*) caused the illness, which prevents this patient from working in this specific environment."

Many people suffer from allergies of various types with varying severity of responses to the antigens. A thorough explanation of the medical definition and condition of "allergy" is given by Dr. P. Anthony Holt in the facsimile file. For an individual like the claimant who is reactive to such a variety of foods and personal care products, it is difficult to determine the exact cause when an allergic reaction does occur. Dr. Holt states, "Correlation of symptom occurrence with specific exposures and absence of symptoms in the absence of exposure is also required to establish that a positive skin test is clinically relevant."

It is also important to note that the claimant responded in a questionnaire presented by Dr. Gardikes that she has hobbies that involve exposure to chemicals, paints, ceramics, in dusty, moldy, and chemically contaminated areas.

Mr. Bill Martin, Workers' Compensation Representative of the General Motors Corporation, stated that samples of the hydraulic fluid used in the tools that Ms. Chadwell handled were obtained

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for use by a physician in challenge testing. Also, scrapings of a material that coated that chassis of vehicles in assembly were obtained for challenge testing by a physician.

I obtained a report by Dr. Homer Williams from General Motors Corporation that was not included in the facsimile file. (Report attached). Dr. Williams states, "Patch tests to FID 132159 (rust preventive), FID 0640261 (brake fluid), FID 103798 (hydraulic fluid), and tow controls were performed. These were read at 36 and 80 hours and were all negative.

"In summary neither a primary irritant reaction nor a delayed contact hypersensitivity could be demonstrated to any of the substances which were available for patch testing. It is unlikely her alleged cutaneous reaction in October, 1988 was due to any of these substances."

The report from Dr. Williams does not specify where the samples of rust preventive, brake fluid, and hydraulic fluid were obtained. If these were in fact the same samples obtained by General Motors, then the work-relatedness of Ms. Chadwell's symptoms would be disproved.

Prior to employment at the Truck And Bus Group, Moraine Assembly Plant, General Motors Corporation in 1985, Ms. Chadwell was employed as an assembler, inspector, and supervisor by the Frigidaire company between 1974 and 1979. After 1979, the claimant waitressed until she began work at General Motors on February 11, 1985. There is no history of allergic reactions prior to employment with General Motors.

At General Motors, the claimant worked in Department 28, Group 2, second shift from February, 1985 until May, 1988. At that time she was transferred within Department 28 to Group 4, second shift. Both work locations involve similar duties and similar tools, only the parts being assembled are different. The assembly tools are powered screwdrivers that are supplied with hydraulic fluid. According to Mr. Martin, the tools do leak on occasion and employees do sometimes have skin contact with the hydraulic fluid.

Hydraulic fluid is a mixture of alkanes and cycloalkanes derived from the distillation of crude petroleum. According to Patty's Industrial Hygiene and Toxicology: Third Revised Edition (Edited by Clayton and Clayton, Wiley-Interscience Publication, 1981, Volume 2B, page 3397), "frequent and prolonged direct skin contact may produce skin irritation and dermatitis in certain hypersensitive individuals, mainly owing to the presence of certain additives."

In conclusion, Ms. Chadwell worked for three years in an assembly job and may have had infrequent direct skin contact with hydraulic fluid leaking from a tool. It is documented that direct skin contact with hydraulic fluid and the additives it contains can

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cause irritation and dermatitis. However, challenge testing with the suspected antigen can prove the absence of a cause-effect relationship if no reaction occurs upon exposure. If the samples used in the patch testing by Dr. Williams were in fact the samples obtained by General Motors from the very tools used by Ms. Chadwell, then work-relatedness could be denied. Otherwise, it is possible that Ms. Chadwell, being an atopic individual, could suffer reactions when exposed to any amount of hydraulic fluid.

Sincerely,



Donald Lewis
Industrial Hygienist

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