PLAINTIFF'S
EXHIBIT
BRK-4

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

October 29, 1982

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

Re: OD 17724-22
George Schumacher
Inland Division - GM
Dayton, Ohio

Attention: Judy Spencer

Dear Ms Spencer:

On September 14, 1982, I visited the Inland Division - GM Industrial Complex, to investigate the occupational disease claim filed by the aforementioned claimant. He is claiming chronic cystitis, secondary to chemical exposure. Inland Division - GM officials in attendance, and assisting in my evaluation, were Mr. David Swafford, Inland Division - GM Workman's Compensation Director, and Mr. Tom Jelenek, Inland Division - GM Industrial Hygienist.

WORK HISTORY:

The claimant was hired in 1970 as a millwright. He has remained in this position to the present. As a millwright his assigned job tasks required his present throughout the Inland Division - GM complex of plants located in the Dayton area.

JOB DESCRIPTION:

See Attachment 1

INVESTIGATION AND FINDINGS:

The claimant reports working or performing maintenance on Banbury

The degreaser mentioned uses hot water and detergent. The Company Industrial hygienist reported sodium hydroxide, as an alkaline solution, being used years hence. However, the present system has been on-board for a number of years. The primary health hazard associated with the use of sodium hydroxide is alkaline burns, and upper respiratory tract irritation.

The solvent recovery system is located on the roof of one of the Plants. It consists of four large closed tanks where solvents (Toluene and Xylene) are pumped via a closed piping system into the tanks. It is then steamed over a bed of charcoal to remove the impurities, then piped out for reuse; again in a closed system. The charcoal is removed and cleaned periodically by an outside vendor. Millwright involvement in the solvent recovery system is removal of the bolts to facilitate removal of the hatches for venting the tanks and ultimate removal of the charcoal by the vendor. The Company Industrial hygienist is on-site during the solvent/charcoal removal process. He has monitored the operation since 1976 and stated the claimant was never involved in this process to the best of his knowledge, from 1976 to the present. The charcoal is cleaned off-site by the vendor after removal.

CHEMICAL LISTING IDENTIFICATION:

Part #60504-54 BT	This is a finished rubber part. There are no fumes/vapors being emitted.
Part #6563	Not enough data for Inland to identify.
Part # 60505-93 BT	This is a finished rubber part. There are no fumes/vapors being emitted.
Part # 16240 Dynotel	Polyisoprene elastomer - not manufactured by Inland. Polyisoprene $(C_5H_8)_n$ is the major component of natural rubber. It is thermoplastic until mixed with sulfur and vulcanized. Supports combustion; nontoxic. No threshold limit value established.[1]
Part # 29225	PVC Resin - granular form. No health hazard associated with PVC in this form. If decomposed at 148°C, toxic fumes of hydrogen chloride will be

Part # 17723	Carbon black Titanium dioxide Phthalocyanine Blue pigment Quinacridons violet Stearic Acid Barium Cadmium Heat Stablizer Polyvinyl chloride resin

The above chemicals listed as Part 17723 are used in the manufacture of Inland automotive rubber products, and are compounded in the Banbury mixers. There is no reported millwright involvement in the compounding of these chemicals.

Part # 17932	Neoprene Rubber Plasticizer-hydrocarbon Carbon black Antioxidant-Naugard Pan
Part # 18122	This number could not be found in the Inland chemical inventory.
Part # 8853 8866 8257	Compounds are the same. Different part numbers means only that quantities mixed are different for chemical compounding in the Banbury mixers. The chemicals used are: Sulfur Accelerator-Nethyltuads Butialdshyde Aneline Accelerator Zinc Oxide
Part # 17767	Nitrile rubber Titanium dioxide Carbon black Molybate orange Diarylide Yellow pigment Paraffin wax Aluminum distearate Stablizer

TOXICOLOGY:

After undertaking a comprehensive review of all the chemicals and chemical compounds listed, it became immediately obvious health hazard information such as target organs, or threshold limit values, have not been established for many of the substances. Compounding this further was the lack of information regarding synergistic action or potentiation such chemical compounds as listed might have on the various body systems. This should not be considered unusual though for there are many such chemicals where there is lack of such supportive data. With this in mind, after a line-by-line review of the Material Identification List, I attempted to concentrate on those chemicals or chemical compounds where there was implication of the bladder or mention of cystitis. [Two chemicals, 4,4-Methylenebis (2-chloroaniline), and beta-Naphthylamine, are cited as causing cystitis; neither of which are on the Material Identification List as provided by Inland Division - GM.]

There is a barium/cadmium compound identified on the list as "Stabilizer", which if used in a soluble form the barium could cause bladder contraction. However, there is no mention of cystitis or inflammation.[2] Cadmium is noted for the renal effect of proteinuria, i.e. urinary excretion of a specific low molecular weight protein, and renal tubular damage.[3] Proteinuria is considered to be the earliest sign of renal tubular dysfunction.[4] There is no mention of bladder involvement or cystitis. A medical professional trained in the organs of the urogenital system would have to establish such association, if any.

Toluene and xylene are classified aromatic hydrocarbons. They are listed in the literature reviewed as skin irritants, and upon repeated or prolonged skin contact causing dermatitis. Volunteers exposed to low toluene concentrations exhibited transitory mild upper respiratory tract irritation at 200 parts per million (ppm). High concentrations may result in paresthesia, disturbance of vision, dizziness, nausea, narcosis, and collapse, and one case of hematologic effects has been recorded. An employee was found unconscious after an exposure to high vapor concentrations of toluene for eighteen hours. Tests indicated hepatic and renal involvement with myoglobinuria, with all effects reversible within six months.[5] Xylene, when inhaled at high concentrations, human acute signs may include a flushing and reddening of the face and a feeling of increased body heat, owing to the dilation of the superficial blood vessels. In addition, disturbed vision, dizziness, tremors, salivation, cardiac stress, CNS depression, confusion, and coma, as well as respiratory difficulties may be apparent. Inhalation of a lower concentration of waste vapors from epoxy resin-concrete disposal containing xylene is recorded to have caused upper respiratory irritation in six of eight workers. Clinical findings were temporary albuminuria,

[Of interest from an investigation standpoint, and as it relates to the claimant's case possibly is the mention of microhematuria (blood in the urine as demonstrated under a microscope) and pyuria (pus in the urine). Also of interest is the mention of bladder contraction from exposure to barium. All of these physiological effects correlate well with the Good Samaritan Hospital report wherein the claimant reportedly has persistant difficulty with voiding and recurrent urinary tract infection.

The benzene-extractable fraction of carbon black caused tumors in several species of animals by ingestion, skin contact, or subcutaneous or intraperitoneal injection; similar exposures to carbon black were not carcinogenic; moreover, carbon black was demonstrated to adsorb known carcinogens and prevent their tumorigenic action.[7] The threshold limit value was set at a level considered to be safe for carbon black dust exposures.

Since most of the materials listed are used in rubber compounding in the Banbury mixers, I conducted a review of disease and mortality among rubber workers. A greater incidence of cancer of the urinary bladder among rubber workers has been recognized for many years. The probable cause is beta-naphthylamine, a possible contaminant in antioxidants added in processing rubber.[8] This same article states products in which beta-naphthylamine was a contaminant have not been used in rubber manufacture since the late 1940's. This is the only chemical compound mentioned citing bladder involvement in the rubber industry. As previously noted beta-naphthylamine is not mentioned on the listing provided, nor is there mention of bladder cancer with the claimant.

CONCLUSIONS:

It is difficult to establish a cause-effect relationship in this case for several reasons. Namely, the claimant as a millwright was not involved in the compounding of the chemicals listed. It was reported to me that the claimant arbitrarily on his journeys through the different Inland Plants, writing down the Inland Item numbers for the chemical compounds, though there was no apparent exposure. In the initial litigation there is mention of the claimant using a medication with a reported side-effect of cystitis. The Inland Industrial hygienist stated the claimant was not involved in the solvent recovery process, thereby raising question as to claimant's contact with the chemical involved. Review of the chemicals listed in the claim file do reveal some bladder, or urogenital system involvement. However, I cannot prove the claimant was directly exposed to any of them.

Respectfully submitted,

52nd ALL-OHIO SAFETY CONGRESS & EXHIBIT
APRIL 20-22, 1982

January 25, 1982

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

OD17724-22
OD17749-22
George Schumacher
Inland Div-GM
Dayton, Ohio

Attn: Judy Spencer

Dear Ms. Spencer:

On December 16, 1981, I visited the Inland Division-GM Complex, 2727 Inland Avenue, Dayton, Ohio. Accompanying me on this visit was the Industral Hygiene Manager, Mr. Louis Gergely, to assist in the compilation of the names of chemicals specifically requested by the Hearing Officer, and to which the claimant alleges exposure to in the workplace.

Our initial contact at the Inland Complex was Mr. David Swafford, Workmen's Compensation Director. Eventually, in an informal meeting we were joined by Mr. Gary W. Auman, Attorney, Smith & Schnacke, 2000 Courthouse Plaza N.E., Dayton, Ohio, representing Inland Div-GM on this claim. Mr. Auman stated prior to release of the information requested by the Hearing Officer, a "Protective Order" protecting the privacy of the chemical names, and their use, would be required prior to release, or further adjudication of the claim.

Therefore, I am returning the claim file without any further action on my part to allow the Legal Section to deal with the Inland Division-GM request for a protective order.

Respectfully submitted,

REFERENCES:

1. Hawley, G. G., The Condensed Chemical Dictionary, pg. 833, pg. 840., 10 Edition, 1981.

2. U.S. Department of HHS, NIOSH, Occupational Disease - A Guide to their Recognition, RW Edition, June 1977, pp. 271-273.

3. Proctor, Chemical Hazards of the Workplace, pp. 139-140, 1978.

4. Patty's Industrial Hygiene and Toxicology, Volume 2A, pg. 1568.

5. Patty's Industrial Hygiene and Toxicology, Volume 2B, pp. 3284-3285.

6. Patty's Industrial Hygiene and Toxicology, Volume 2B, pp. 3294-3295.

7. Proctor, Chemical Hazards of the Workplace, pp. 146-147, 1978.

8. Monson RR, Nakano KK, Mortality among rubber workers, Am J Epidemiol 1976; 103:294-295.

INLAND DIVISION
General Motors Corporation
Dayton, Ohio

JOB CLASSIFICATION
CODE AND DESCRIPTION

Occupation Name: Millwright

Job Code 0748

Date Submitted *6-18-41 (resubmitted 2-5-68 & 9-4-74)

Description of Job: Dismantles, moves, erects, aligns and may repair plant equipment, such as overhead tracks, conveyors, line shafting, etc. involved in plant layout and rearrangement. Constructs and alters steel and metal structures, such as hoppers, chutes, bins, etc. Moves equipment by means of shop trucks, tractors and cranes, chain falls, rigging and rollers. May use acetylene cutting torches and riveters. May erect scaffolding. May install concrete foundations for machines. Should be able to read and work from blueprints or sketches. Performs duties on specific jobs and/or throughout an assigned area with a minimum of supervision. Is required to keep and leave his assigned area in a tidy and clean condition. May have the assistance of others as deemed necessary by supervision. The above description outlines in general terms the essential duties of the classification but is not intended to describe these duties in detail.

*NOTE: This classification and description was already established at the time Local Union #87 secured Bargaining Rights (Agreement dated 6-18-41).

OPERATIONS COVERED

Department 13-913-21-921-24-924

Date: 1-27-75

Local No. 87, U.R.C.I.P.W.A.-C.I.O. INLAND DIVISION, GMC