PLAINTIFF'S EXHIBIT

INDUSTRIAL HYGIENE DEPARTMENT
INDUSTRIAL RELATIONS STAFF
GENERAL MOTORS CORPORATION

September 28, 1976

Reference No. 7564-L

Mr. W. McCrocklin
Manager
Circle Buick
550 W. 59th Street
New York, New York

Dear Mr. McCrocklin:

On December 8 and 9, 1975 a survey was made at Circle Buick, New York City, to determine the nature and extent of employe exposures to asbestos, solvent vapor, and carbon monoxide. Pertinent matters were discussed with Messrs. W. McCrocklin, S. T. Kirchoff, W. Reinmann, E. Scarborough, S. Reese, and W. McRorie. The survey was conducted by the writer. Results of air tests were reported by telephone on February 4, 1976.

Asbestos

In response to an alert issued on August 8, 1975 by the National Institute for Occupational Safety and Health indicating a potential health hazard for persons exposed to asbestos during the servicing of motor vehicle brake and clutch assemblies, air tests were made to evaluate the extent of employe exposure during the following various brake operations: (1) State of New York annual motor vehicle inspections: and (2) routine brake servicing.

At this location after wheels were removed, residual dust was dumped out and, where needed, brake components removed and replaced. At no time was dust removed by blowing with compressed air.

The OSHA Asbestos Standard stipulates that employe exposures to asbestos shall not exceed the eight-hour, time-weighted average of 2 fibers greater than 5 micrometers in length per cubic centimeter of air sampled (fibers/cc). At no time can employe exposures exceed the ceiling limit of 10 fibers/cc.

In order to relate asbestos exposure during various phases of brake service operation to the ceiling exposure limit, several air samples of short duration (the actual length of the operation) were collected. Past experience has shown that test results from these kinds of air samples tend to be higher than time-weighted averages.

The results of air tests indicated that most exposures were below the prescribed OSHA limits. Although Tests 1 and 14 approach and Test 2 exceeds the current accepted permissible exposure level, these exposures persisted for only a short period. When extrapolated over an eight-hour workday, the time-weighted averages are considerably lower. Thus, it appears reasonable that all time-weighted asbestos exposures were within accepted limits. No changes are required.

Recently, the Occupational Safety and Health Review Commission clarified the question of which employes should receive OSHA-required medical examinations. The Commission ruled that examinations must be administered to employes who have any exposure to asbestos. Dr. R. G. Wiencek, GM Medical Director, has requested that Dr. N. A. Pace, GM Building, New York City, be contacted to make whatever additional arrangements may be necessary.

sults of Tests for Asbestos

st o.	Employe and/or Operation	Asbestos Fibers/cc
	following air tests were made while performing a required York State brake inspection on a 1976 Buick Regal. All sts were made concurrently. Sampling time - 5 minutes.	
	L. Rosenzweig (107-20-1566). Brake mechanic who removed wheel, dumped dust, visually examined linings, and replaced wheels.	1.8
	Test made at same location and at same time as Test 1, above.	4.5
	General Condition (GC) measured at right rear wheel.	*ND
	GC measured at right front wheel.	ND
	GC measured at left front wheel.	0.9
	GC measured at left rear wheel.	0.9
	Sample lost.	---
	following air tests were made while employe removed the brake ings from an Opel. All tests were made concurrently. pling time - 12 minutes unless otherwise indicated.	
	GC measured at left rear wheel.	ND
	GC measured at left front wheel.	ND
	GC measured at right rear wheel.	0.4
	R. Forbes (074-50-5880). Brake mechanic who removed linings from all four wheels.	0.4

*ND = None Detected

Employe and/or Operation	Asbestos Fibers/cc
GC measured at right front wheel.	ND
R. Forbes. Removing left rear wheel linings. Sampling time - 1.5 minutes.	ND
R. Forbes. Removing and replacing right rear wheel linings. Sampling time - 2.5 minutes.	1.8
R. Forbes. Replacing left front wheel linings. Sampling time - 1.25 minutes.	ND
R. Forbes. Removing left front wheel linings. Sampling time - 1.3 minutes.	ND
R. Forbes. Removing right front wheel linings. Sampling time - 3.25 minutes.	ND

vent Vapors

Air tests for solvent vapor were made while a spray nter prepared, sanded, and applied primer and finish coats motor vehicles. The paint was thinned with Surfasol 8000 tomotive Lacquer Company of New York) which contained toluene d xylene. Air samples for toluene and xylene were collected activated charcoal and analyzed by gas chromatography.

OSHA Regulations stipulate that employe exposures to uene and xylene shall not exceed eight-hour, time-weighted erages of 200 parts per million parts of air, by volume (ppm), d 100 ppm by volume, respectively.

The results of tests indicate that all exposures e within permissible limits.

t . Employe and/or Operation	Asbestos Fibers/cc
GC measured at right front wheel.	ND
R. Forbes. Removing left rear wheel linings. Sampling time - 1.5 minutes.	ND
R. Forbes. Removing and replacing right rear wheel linings. Sampling time - 2.5 minutes.	1.8
R. Forbes. Replacing left front wheel linings. Sampling time - 1.25 minutes.	ND
R. Forbes. Removing left front wheel linings. Sampling time - 1.3 minutes.	ND
R. Forbes. Removing right front wheel linings. Sampling time - 3.25 minutes.	ND

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ults of Tests for Solvent Vapor

t . Employe and/or Operation	Concentration (ppm) Toluene	 Xylene
H. Johnston (109-38-1445). Preparing vehicle for painting. Sampling time - 166 minutes.	5	1
F. Menard. Sanding and applying primer. Sampling time - 166 minutes.	7	1

bon Monoxide

Air tests for carbon monoxide were made throughout Service Department to determine the effectiveness of local haust ventilation. Carbon monoxide was measured with an MSA versal Pump and indicator tubes. Since the results of sts 3, 6, 7, 8, and 10 approach or exceed the permissible posure limit, it is suggested that more extensive air testing performed to determine the eight-hour, time-weighted average ncentrations of carbon monoxide which might persist under a iety of conditions.

OSHA Regulations stipulate that employe exposures to bon monoxide shall not exceed the eight-hour, time-weighted rage of 50 ppm.

sults of Tests for Carbon Monoxide

st . Location	Carbon Monoxide in ppm
General Condition (GC) measured in aisle between Quick Service and Opel Departments, 12/8/75, 1:30 P.M.	35
GC in service reception area. Door open and cars running intermittently, 12/8/75, 2 P.M.	30

st o.	Location	Carbon Monoxide in ppm
4	GC in aisle by Quick Service and Parts Departments, 12/8/75, 2:30 P.M., 4 P.M.	55, 35
5	GC in tower office, 12/8/75, 4 P.M.	25, 20
7	GC in service reception area. Door open, 12/9/75, 8:45 A.M.	50, 45
9	GC in tower office, 12/9/75, 9 A.M.	50, 25
0	GC in service reception area. Door open and cars running intermittently.	60

Please advise this office on action taken in line with recommendations.

Sincerely,

William Hay Krebs

W. H. Krebs, Ph.D.
Industrial Hygiene Dept.

:cjh

: Mr. W. C. McRorie
Dr. R. G. Wiencek
Dr. N. A. Pace