

FILE NAME: Allied Signal Bendix (ASB)

DATE: 1979

DOC#: ASB045

DOCUMENT DESCRIPTION: Reports and Letters RE Air Quality Reports - Bendix Windsor Plant - Ontario Ministry of Labor



01/041

ONTARIO



MINISTRY OF LABOUR
INDUSTRIAL HEALTH & SAFETY
BRANCH

JUL 4 1979

OCCUPATIONAL HEALTH &
SAFETY DIVISION

OCCUPATIONAL HEALTH BRANCH

AIR QUALITY ASSESSMENT REPORT

Ontario Ministry of L

JUL 6 1979

LONDON

Date: May 31, 1979

From: J.H. Williams

Plant: Bendix Automotive of Canada Ltd.

Address: 945 Prince Road
Windsor, Ontario

Contacts: Mr. G. Detenbeck, Manager,
Health, Safety & Security
Mr. M. Sinkevitch, Acting
Plant Chairman (Union)

Hazard: 1,1,1, Trichloroethane
Zinc Dimethyl Dithio Carbamate

Requested by: Dr. I. Taraschuk, OHB
April 24, 1979

Accompanied by: Mr. L. Barker, IHSE
Mr. R. Wood, OHB

Date of Visit: May 2, 1979

Copies to: Dr. P. Pelmear
Mr. J. McNair (3) ✓
Mr. S. Morton
Dr. I. Taraschuk
Mr. G. Detenbeck

Abstract: An air quality assessment visit was made to the above company and the attached tables summarize the results of this visit.

Air samples for 1,1,1 Trichloroethane were taken by drawing air through glass tubes containing charcoal, at an air flow rate of 100 millilitres per minute, using portable low-flow air sampling pumps. Samples were taken sequentially.

Air samples for Zinc dimethyl dithio carbamate were collected on tared 0.8 micron pore-size cellulose ester filters, using portable air sampling pumps, at an air flow rate of two litres per minute. The results of these samples are reported as total dust and zinc content (The laboratory was unable to report total zinc dimethyl dithio carbamate).



May 31, 1979

Degreasing of small parts, using 1,1,1, Trichloroethane, by the stock man is performed only once or twice daily, at which time enough parts are prepared for the whole day's production. On the day of the visit, enough parts had been prepared for each line prior to our arrival. A simulation of this operation on line #2 was arranged to enable air samples to be taken. (Sample #104).

Air sampling for zinc dimethyl dithio carbamate was done on two lines, #3 and #6, that were using diaphragms coated with the zinc diemthyl dithio carbamate, which has the appearance of a bluish bloom. (More recent purchases of diaphragms are from a new supplier and no longer are coated in zinc dimethyl dithio carbamate). The union, however, were more concerned with a third type of diaphragm, on which the zinc dimethyl dithio carbamate appears as a shiny needlelike crystalline deposit. These particular diaphragms were not in use at the time of our visit, therefore the assembly operation using these diaphragms was simulated by the operator removing diaphragms from the shipping case, placing them on the assembly block and returning them to another case (Sample #12). The two simulations described above were arranged between the area supervisors and the union safety representative.

JHW/ep

for L. R. Rhoads
J.H. Williams
Air Quality Technician

JUN 5 1979

Occupational
Health
BranchOccupational Health
Engineering
Service

Table of Results

☒ Personal Samples
☒ Area Samples

Company

Bendix Automotive

Address

Windsor, Ontario

Date _____

May 2/79

Table No.

3

[OHB File No.]

15779DEAB-M

AQA File #

1501

page 3-5

Air Samples

Sample No.	Employees Name and ☒ Job Description or ☒ Location	Pump Name and Code No.	Hazard: 1,1,1, TRICHLOROETHANE				
			Time Minutes	Volume Litres corrected for Temp. Press	Weight ☐ Milligrams ☒ Micrograms	Concentration ☐ mg/m ³ of air ☒ ppm	Conc'n T.L.V
100A	J. Kururdek, line #6, cleaning shells using 1,1,1 Trichloroethane	Bendix B 16	29	2.9	N.D.<10.0	<1	
100B			122	12.2	N.D.<10.0	<1	
100C			63	6.3	N.D.<10.0	<1	
101A	General Area Sample, line #6, shell degreasing area	Bendix B 6	164	16.4	N.D.<10.0	<1	
101B			60	6.0	N.D.<10.0	<1	
102A	General Area Sample, line #1 beside degreaser dip bucket	Bendix B 109	159	15.9	N.D.<10.0	<1	
102B			55	5.5	N.D.<10.0	<1	
103A	General Area Sample, line #4 beside degreaser dip bucket	Bendix B 107	162	16.2	N.D.<10.0	<1	
103B							
104A	G. Arsenault, line #2, stock man, degreasing small parts	Bendix B 7	73	7.3	N.D.<10.0	<1	
104B			57	5.7	N.D.<10.0	<1	
Samples bracketed were taken sequentially - less than N.D. - Not Detected							



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Table of Results

☒ Personal Samples
☒ Area Samples

Company Bendix Automotive
Address Windsor, Ontario

Date May 2/79
OHB File No. 15779DEAB-M

Table No. 2
AQA File 1501

page 4-5

Air Samples

Sample No.	Employees Name and ☒ Job Description or ☒ Location	Pump Name and Code No.	Hazard: TOTAL DUST				Conc'n T.L.V
			Time Minutes	Volume Litres corrected for Temp - Press	Weight ☒ Milligrams ☐ Micrograms	Concentration ☒ mg/m ³ of air ☐ ppm	
1.	S. Percy line #6, diaphragm assembly	Bendix B 54	168	336	0.06	0.18	
2.	B. Demcie line #3, diaphragm assembly machining op.	Bendix B 71	173	346	0.18	0.52	
3.	R. Bernier line #3, right crimping machine operator	Bendix B 36	172	344	0.26	0.76	
4.	B. Scaife line #6, right crimping machine operator	Bendix B 40	181	362	0.04	0.11	
5.	P. Renaud line #6, "blow-job" operator	Bendix B 53	184	368	0.16	0.43	
6.	J. Nantais line #6, left crimping machine operator	Bendix B 70	183	366	0.46	1.26	
7.	General Area Sample, line #6, beside shell seal inserter	Bendix B 31	218	436	0.16	0.37	
8.	General Area Sample, line #6, on column, south of line at east end	Bendix B 73	189	378	0.06	0.16	
9.	General Area Sample, line 6, south side, beside crimping machine	Bendix B 48	215	430	0.12	0.28	
10.	General Area Sample, line #3, on parts display board	Bendix B 101	204	408	0.12	0.29	
11.	General Area Sample, line #3, south west of crimping machine	Bendix B 66	205	410	0.02	0.05	
12.	J. Basar line #7, diaphragm assembly (simulation)	Bendix B 87	81	162	0.06	0.37	



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Engineering
Service

Table of Results

- ☒ Personal Samples
☒ Area Samples

Company

Bendix Automotive

Address

Windsor, Ontario

Date

May 2/79

Table No.

3

OHB File No.

15779DEAB-M

AQA File

1501

page 5-5

Air Samples

Sample No.	Employees Name and ☒ Job Description or ☒ Location		Pump Name and Code No.	Hazard: ZINC				Conc'n T.L.V
				Time Minutes	Volume Litres corrected for Temp-Press	Weight ☐ Milligrams ☒ Micrograms	Concentration ☒ mg/m ³ of air ☐ ppm	
1.	S. Percy	line #6, diaphragm assembly	Bendix B 54	168	336	1.2	< 0.01	
2.	B. Demcie	line #3, diaphragm assembly machining op.	Bendix B 71	173	346	< 1	< 0.01	
3.	R. Bernier	line #3, right crimping machine operator	Bendix B 36	172	344	< 1	< 0.01	
4.	B. Scaife	line #6, right crimping machine operator	Bendix B 40	181	362	< 1	< 0.01	
5.	P. Renaud	line #6, "blow-job" operator	Bendix B 53	184	368	< 1	< 0.01	
6.	J. Nantais	line #6, left crimping machine operator	Bendix B 70	183	366	< 1	< 0.01	
7.	General Area Sample, line #6, beside shell seal inserter		Bendix B 31	218	436	< 1	< 0.01	
8.	General Area Sample, line #6, on column, south of line at east end		Bendix B 73	189	378	< 1	< 0.01	
9.	General Area Sample, line 6, south side, beside crimping machine		Bendix B 48	215	430	< 1	< 0.01	
10.	General Area Sample, line #3, on parts display board		Bendix B 101	204	408	< 1	< 0.01	
11.	General Area Sample, line #3, south west of crimping machine		Bendix B 66	205	410	< 1	< 0.01	
12.	J. Basar	line #7, diaphragm assembly (simulation)	Bendix B 87	81	162	< 1	< 0.01	

< - Less than



Ontario
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Labour

Company
Address

BENDIX AUTOMOTIVE OF CANADA LTD.
945 PRINCE ROAD
WINDSOR

Date

MAY 2, 1979

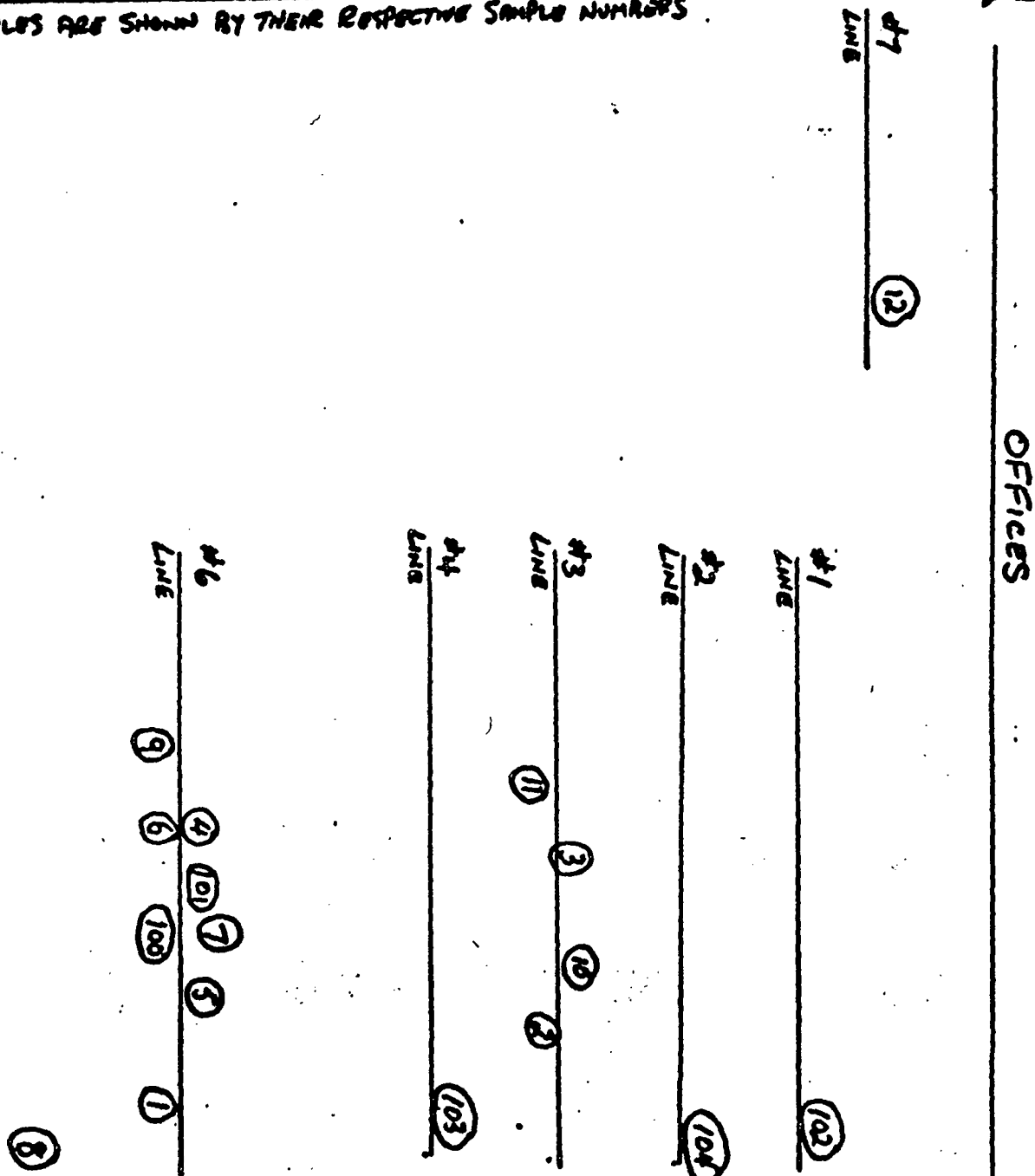
Field Visit Number 15779DEAR-M

A.Q.A. No. 1501

Page ____ of ____

DIAGRAM OF AIR SAMPLING LOCATIONS (NOT TO SCALE)

AIR SAMPLES ARE SHOWN BY THEIR RESPECTIVE SAMPLE NUMBERS



OFFICES



June 19, 1979

To
Dr. P. Peimear, Chief
Occupational Health Services
copies to: Mr. J. McNair
Mr. G. Rajhans
Mr. G. Detenbeck

From
I. Taraschuk, M.D.
Medical Consultant
80 Dundas St.
London, Ontario

RE: Bendix Automotive of Canada Limited
945 Prince Rd.
Windsor, Ontario
A.Q.A. Report # 1501

Comments:

1. On May 2 air sampling was done at this plant for : trichloroethane and total dust.
2. The airborne concentrations of trichloroethane were within the levels acceptable for occupational exposure in Ontario.
3. From the total dust measurements it may be concluded that a person could be exposed to an airborne concentration of 1.26mg/m³ of zinc dimethyl dithio carbamate at most. As stated in the discussions with both Company and Union, since a TLV does not exist for zinc dimethyl dithio carbamate there is no standard with which to compare this exposure. However, it should be stressed that mucous membrane and skin irritation may occur with this substance.
4. It is felt that the working environment is within acceptable standards at this plant with regard to trichloroethane. For those workers that are irritated by the zinc dimethyl dithio carbamate protective equipment should be provided as outlined in the original report.

I. Taraschuk
I. Taraschuk, M.D.

IT:jv

To: C.S. Rajhans, M.Sc.(Eng.), P.Eng.
Chief
Occupational Health Engineering

Date: May 25, 1979

File: OHB File No. 16879 AEO

From: O.P. Malik, Ph.D., P.Eng.
Consultant
Occupational Health Engineering

Re: Bendix Automotive
945 Prince Road,
Windsor, Ontario

SUPPLEMENTARY TO PREVIOUS REPORTS:

The attached Air Quality Report No. 1397 shows that none of the sixteen samples taken from the above mentioned plant indicated asbestos concentration in excess of the proposed Ontario Standard of 2 fibres/cc.

Comments:

1. One sample (#8) representing the exposure to the vacuumer shows a concentration of 1.7 fibres/cc. Although this value is below the Ontario Standard of 2 fibres/cc, it should be realized that the standard is based on a time weighted average for 8 hours. The job of vacuumer is such that the asbestos exposure could vary significantly in space and time. In my judgement, the vacuumer may sometimes be subjected to concentrations in excess of the standard in spite of the lower measurement.
2. Asbestos concentration in one sample (#7) representing personal exposure of a hand liner assembler is found to be 1.8 fibres/cc. This value is in contrast to 0.75 fibres/cc measured in another sample (#6) from similar operation. The difference between the two may be due to variability in dust generation with different work practices, or different types of brake shoes.

May 24, 1979

Recommendations:

Although none of the samples show concentrations in excess of the Ontario Standard, the best practice is to keep the asbestos levels to as far below the Standard (2f/cc) as possible.

1. Adequate dust control measures should be provided at the hand liner assembly stations to ensure that the personal exposure to workers does not exceed the standard of 2 f/cc. Until such measures are provided, it is recommended that the hand liner assemblers should wear approved respirators that provide protection against pneumoconiosis causing dust.
2. Approved respirators that provide protection against pneumoconiosis causing dust should be worn by the vacuummer.

Note:

In Ontario, the approval list of National Institute of Occupational Safety and Health is normally accepted.

O.P. Malik

O.P. Malik

OPM/hb



C i C j



OCCUPATIONAL HEALTH BRANCH

AIR QUALITY ASSESSMENT REPORT

Date: May 7, 1979

From: E. Latty

Plant: Bendix Automotive of Canada

Address: 1473 Argyle Road
Windsor, Ontario

Contacts: Mr. G. Detenbeck, Manager
Health & Safety
Mr. J. McCann, Union Safety Rep.
UAW-Local 195

Hazard: Asbestos

Requested by: Dr. O.P. Malik, OHB
February 21, 1979

Accompanied by: Mr. L. Ouellette, IHSB
Mr. N. Nagalingam, OHB

Date of Visit: March 15, 1979

Copies to: Dr. P. Pelmeur
Mr. J. McNair (3) ✓
Mr. S. Morton
Dr. O. Malik
Dr. J. Vingilis
Mr. G. Detenbeck

Abstract: An Air Quality Assessment visit was made to the above plant. (Department #25)

The attached table lists the results of personal and area air samples collected for asbestos.

The samples were taken using an air flow rate of two liters per minute, on open face 0.8 micron, 37 millimeter diameter cellulose acetate filters.

Comments

1. No local mechanical exhaust was observed at the rivetting machines.
2. Changing of Dust Collector waste box was of short duration (10 minutes). Spillage of material was also observed at the time of the visit.
3. The samples were taken during the morning period, approximately 9:30 a.m.-11:30 a.m.

EL/ep

E. Latty
E. Latty

MAY 11 1979

Occupational
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Occupational Health
Engineering
Service

Table of Results

- ☒ Personal Samples
☒ Area Samples

Company

Bendix Automotive

Address

Windsor, Ontario

Date

Apr. 14/78

OHB File No.

16879AEO

Air Samples

Ontario Standard - 2 fibres

☐ Employees Name and ☒ Job Description or ☒ Location		Pump Name and Code No.	Hazard: <u>ASBESTOS</u>		
			Time Minutes	Volume Litres Collected At Temp. Pres.	Total Fibres Greater than 5 Micrometers in Length per cc of
Sauve	#1 station, straight line	Bendix B 5	105	210	0.14
Bridgewater	#2 station, hold down, straight line	Bendix B 82	105	210	0.54
Lustig	#3 station, straight line	Bendix B 89	105	210	0.34
Pillon	Last station, straight line	Bendix B 98	105	210	0.47
Burchat	Pin liner operator	Bendix B 2	105	210	0.81
Salon	Hand liner assembler	Bendix B 35	105	210	0.75
Lentegne	Hand liner assembler	Bendix B 23	105	210	1.8
Grinbage	Nilfisk portable vacuumer	Bendix B 30	105	210	1.7
Dayne	Stock and Chute, Hand line operator	Bendix B 24	105	210	0.52
Bury	Date coder	Bendix B 5	105	210	0.74



Ontario
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Occupational Health
Engineering
Service

Table of Results

- ☒ Personal Samples
☒ Area Samples

Company
Bendix Automotive
Address
Windsor, Ontario

Date
Apr. 14/79

Table No.
2

OHB File No.
16879AE0B

AQA File
1397

page 3-3

Air Samples

Ontario Standard - 2 fibres/cc

Sample No.	Employees Name and ☒ Job Description or ☒ Location		Pump Name and Code No.	Hazard: <u>ASBESTOS</u>			
				Time Minutes	Volume 1 litre - converted to Temp. 20°C	Total Fibres Greater than 5 Micrometers in Length per cc of Air	Conc'n T.L.V
11.	Background	near water fountain	MSA 28	105	210	0.64	
12.	Background	packaging station, hand line	MSA 34	105	210	0.29	
13.	Background	packaging station, straight line	MSA 231	105	210	0.93	
14.	Background	on column, straight line	MSA 38	105	210	0.84	
15.	T. Harding	Inspector	Bendix B 23	30	60	* sample contaminated	
16.	Background	on desk, receiving area	MSA 38	30	60	0.64	
Results were obtained sequentially							
* Heavily contaminated							

G.S. Rajhans, M.Sc.(Eng.), P.Eng.
Chief
Occupational Health Engineering

Date: May 24, 79

File:

From: O.P. Malik, Ph.D., P.Eng.
Consultant
Occupational Health Engineering

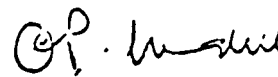
Re: Bendix Automotive
1473 Argyle Road
Windsor, Ontario

SUPPLEMENTARY TO PREVIOUS REPORTS:

The attached Air Quality Report No. 1398 shows that airborne asbestos concentration is below the Ontario Standard of 2 fibres/cc, in all the samples.

During my last engineering visit, (O.H.B. #05773 KEOA), concern was expressed that the water fountain is located in the same room where asbestos is handled, and employees from other areas of the plant have to come to this room to use the fountain, thus causing unnecessary exposure. One sample taken near this water fountain (#14) shows fibre concentration of 0.44 fibres/cc. This concentration is not excessive and probably represents the background. In my judgement, the exposure at the water fountain is minimal.

However in view of the fact that asbestos is considered to be a carcinogen, it is suggested that unnecessary exposure to asbestos be avoided by relocating the drinking fountain elsewhere in the plant with no asbestos exposure.


O.P. Malik

OPM/hb



01 04



OCCUPATIONAL HEALTH BRANCH

AIR QUALITY ASSESSMENT REPORT



Ontario Ministry of Labour

JUN 1 1979

LONDON

Date: May 7, 1979

From: E. Latty

Plant: Bendix Automotive of Canada

Address: 945 Prince Road
Windsor, OntarioContacts: Mr. G. Detenbeck, Manager
of Health & Safety
Mr. T. Hardy, UAW, Local 195

Hazard: Asbestos

Requested by: Dr. O.P. Malik, OHB
January 23, 1979Accompanied by: Mr. L. Barker, IHSB
Mr. N. Nagalingam, OHB

Date of Visit: March 14, 1979

Copies to: Dr. P. Pelmeur
Mr. J. McNair (3)
Mr. S. Morton
Dr. O. Malik
Dr. J. Vingilis
Mr. G. Detenbeck**Abstract:** An air quality assessment visit was made to the above plant (Department #27).

The attached table lists the results of personal and area air samples collected for Asbestos.

The sixteen samples were taken using an air flow rate of two liters per minute on open face 0.8 micron, 37 mm diameter cellulose acetate filters.

Comments

Samples were collected in the afternoon shift 3:30 p.m.-10:30 p.m.. Management reported that this period would be a high time in production procedures.

for W. Blum
E. Latty

MAY 11 1979

Table of
Results☒ Personal Samples
☒ Area Samples

Company

Bendix Automotive

Address

Windsor, Ontario

Date

Apr. 14/79

Table No.

1

OHB File No.

16879AEQB

AOA File No.

1397

e 2-3

Air Samples

ONTARIO STANDARD 2F/CC.

No	Employees Name and ☒ Job Description or ☒ Location	Pump Name and Code No.	Hazard: <u>ASBESTOS</u>			
			Time Minutes	Volume Litres collected 40° Temp. Press	Total Fibres Greater than 5 Micrometers in Length per cc of Air	Conc'n T.L.V
	S. Sauve #1 station, straight line	Bendix B 5	105	210	0.14	0.07
	L. Bridgewater #2 station, hold down, straight line	Bendix B 82	105	210	0.54	0.27
	G. Lustig #3 station, straight line	Bendix B 89	105	210	0.34	0.17
	J. Pillon Last station, straight line	Bendix B 98	105	210	0.47	0.24
	M. Burchat Pin liner operator	Bendix B 2	105	210	0.81	0.40
	A. Salon Hand liner assembler	Bendix B 35	105	210	0.75	0.37
	R. Lentegne Hand liner assembler	Bendix B 23	105	210	1.8	0.90
	S. Grinbage Nilfisk portable vacuumer	Bendix B 30	105	210	1.7	0.85
	B. Dayne Stock and Chute, Hand line operator	Bendix B 24	105	210	0.52	0.26
	S. Bury Date coder	Bendix B 5	105	210	0.74	0.37

Occupational Health Branch
Occupational Health Engineering Service

Table of Results

- ☒ Personal Samples
☒ Area Samples

Company Bendix Automotive
Address Windsor, Ontario

Date
Apr. 14/79

OHB File No.
16879AEOB

Air Samples

Ontario Standard - 2f/

Employees Name and ☒ Job Description or ☒ Location		Pump Name and Code No.	Hazard: <u>ASBESTOS</u>		
			Time Minutes	Volume litres corrected for Temp Press	Total Fibres Greater than 5 Micrometers in Length per cc of
und	near water fountain	MSA 28	105	210	0.64
und	packaging station, hand line	MSA 34	105	210	0.29
und	packaging station, straight line	MSA 231	105	210	0.93
und	on column, straight line	MSA 38	105	210	0.84
ing	Inspector	Bendix B 23	30	60	sample contain
und	on desk, receiving area	MSA 38	30	60	0.64
were obtained sequentially					
ly contaminated					



To: G.S. Rajhans, M.Sc.(Eng.), P.Eng.
Chief
Occupational Health Engineering

Date: May 25, 1979

File: OHB File No. 16879 AEOB-M

From: O.P. Malik, Ph.D., P.Eng.
Consultant
Occupational Health Engineering

Re: Bendix Automotive
945 Prince Road,
Windsor, Ontario

SUPPLEMENTARY TO PREVIOUS REPORTS:

The attached Air Quality Report No. 1397 shows that none of the sixteen samples taken from the above mentioned plant indicated asbestos concentration in excess of the proposed Ontario Standard of 2 fibres/cc.

Comments:

1. One sample (#8) representing the exposure to the vacuumer shows a concentration of 1.7 fibres/cc. Although this value is below the Ontario Standard of 2 fibres/cc, it should be realized that the standard is based on a time weighted average for 8 hours. The job of vacuumer is such that the asbestos exposure could vary significantly in space and time. In my judgement, the vacuumer may sometimes be subjected to concentrations in excess of the standard in spite of the lower measurement.
2. Asbestos concentration in one sample (#7) representing personal exposure of a hand liner assembler is found to be 1.8 fibres/cc. This value is in contrast to 0.75 fibres/cc measured in another sample (#6) from similar operation. The difference between the two may be due to variability in dust generation with different work practices, or different types of brake shoes.

Recommendations:

Although none of the samples show concentrations in excess of the Ontario Standard, the best practice is to keep the asbestos levels to as far below the Standard (2f/cc) as possible.

1. Adequate dust control measures should be provided at the hand liner assembly stations to ensure that the personal exposure to workers does not exceed the standard of 2 f/cc. Until such measures are provided, it is recommended that the hand liner assemblers should wear approved respirators that provide protection against pneumoconiosis causing dust.
2. Approved respirators that provide protection against pneumoconiosis causing dust should be worn by the vacuumer.

Note:

In Ontario, the approval list of National Institute of Occupational Safety and Health is normally accepted.

O.P. Malik

O.P. Malik

OPM/hb



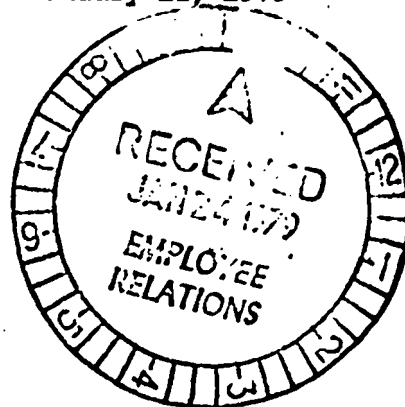
Ontario
Ministry of
Labour

Occupational Health Branch
400 University Ave., 7th floor
Toronto, Ontario M7A 1T7

Tel: 416/965-4066

January 12, 1979

Mr. G. Detenbeck
Manager, Health & Safety
Bendix Automotive of Canada Ltd.
1473 Argyle Road
Windsor
Ontario



Dear Mr. Detenbeck:

Enclosed is a copy of the Field Visit Report prepared
by O.P. Malik, Ph.D., P. Eng. following a visit to your company
on November 23, 1978.

Yours truly,

G S Rajhans

G.S. Rajhans, M.Sc. (Eng.) P.Eng.
Chief
Occupational Health Engineering

GSR:ss



Occupational Health Branch

FIELD VISIT REPORT

Date: January 9, 1979

From: O.P. Malik, Ph.D. , P.Eng.

Plant: Bendix Automotive of Canada Ltd.

Address: 1473 Argyle Road
Windsor, Ontario

Contact: Mr. G. Detenbeck
Manager, Health & Safety
Mr. J. McCann
Union Safety Representative
U.A.W. Local 195

Hazard: Asbestos

Requested by: I.H.S.B.

Date of Request: November 7, 1978

Accompanied by: Mr. L.D. Ouellette

Date of Visit: November 23, 1978

Copies to: Dr. P.L. Pelmeur
Mr. J. McNair (3)
Mr. H. Todd
Mr. S. Morton
Mr. G. Detenbeck

Abstract: An engineering visit was made to assess the asbestos exposure to approximately 10 to 12 employees involved in drilling, rivetting and grinding of asbestos containing brake linings at the above mentioned plant. The grinding wheels and drilling machines are adequately exhausted but some concern of exposure is expressed at the rivetting operation where no mechanical local exhaust is provided.

Air sampling will be carried out by this branch to measure the airborne concentration of asbestos.

Recommendations are made to confine and capture airborne asbestos at the grated table where drilled brakelinings are dropped to shakeout loose dust in the drilled holes. No directions are suggested to be issued.

In the above mentioned plant, brakelinings are received in a shaped form, are drilled and rivetted to brake shoes. They are finally tapered by turning on the face of grinding wheels. A detailed description of the process is described in previous field visit reports of Messrs. H.M. Nelson and G.S. Rajhans.

Bendix Automotive of Canada Ltd.
January 9, 1979

Comments:

1. According to the Company, the brakelinings contain between 50 to 60% chrysotile asbestos. The asbestos content of a particular batch depends upon the supplier of the linings. Local mechanical exhaust is provided at the two most dust producing operations, drilling (two machines) and grinding (four grinding wheels). Air velocity measurements were made using a velometer and are listed in the table below:

Location or Operation	Type of Hood	Face Opening	Face Velocity FPM (f/min)	Air Volume CFM (f ³ /min)	Air Volume CFM in 1976
Grinder #1	3/4 enclosed	22" x 6"	1200	1100	1100
Grinder #2	3/4 enclosed	22" x 6"	1200	1100	1100
Grinder #3	3/4 enclosed	22" x 6"	950	870	855
Grinder #4	3/4 enclosed	22" x 6"	950	870	855

*No local
exhaust*

2. At the rivetting machines, no local mechanical exhaust is provided. Concern was expressed that some loose dust in the drilled holes gets airborne during rivetting. The amount of dust in these holes appeared quite small but the workers informed me that with certain types of brake linings a significant amount of dust is released. Some fibers were also observed on the machines as rafter dust. Although significant exposure is not expected, air sampling at or near the rivetting operation will be carried out by this branch.

3. The drilling operation is enclosed and it was not possible to measure the exhaust rate. However, the mechanical exhaust appeared to be quite effective.

*Primitive
methods*

4. After the linings are drilled, they are dropped on a grated table approximately 23" x 21" x 27" high to remove the loose dust which is collected in a polyethylene bag tied under the grated surface. This table is not exhausted and some of the loose dust gets airborne as drilled linings are dropped. The concentration of airborne asbestos did not appear to be excessive as most particles were quite coarse. However, air sampling in the vicinity will be carried out to evaluate the airborne concentration of asbestos.

5. Floors and machines are vacuum cleaned using a 'NILFISK' portable vacuum cleaner. No dry sweeping

Bendix Automotive of Canada Ltd.
January 9, 1979

6. One of the employees working on the rivetting machine was seen wearing an approved respirator (3M Co. Type 8710).

7. Concern was expressed that the water fountain is located in one corner of the room where asbestos is being handled and it may be a potential source of hazard for all workers in the plant.

In my opinion the fibre concentration near the fountain is not likely to be significant as judged from the ventilation system and the results of previous surveys carried out near the dust producing operations. In order to assess the exact level of asbestos hazard at this location, air sampling will be carried out.

Further Action by O.H.B.

Personal and Area sampling for Asbestos will be carried out near the following location:

Rivetting machines
Drilling machines
Grinding machines
Near the water fountain.

Recommendations:

Has this been done?

When dealing with hazardous substances such as asbestos, the best practice is to keep their airborne concentration as low and as confined as possible. At the grated table (see comment #4) asbestos fibres are allowed to get airborne and dissipate in the room. In order to confine and capture these fibres, it is recommended that the grated table should be enclosed (e.g. a hood with one side open) and adequately exhausted (150-200 CFM per sq. foot of the face of hood).

2. Further comments will be made after the air sampling results are known.

O.P. Malik

O.P. Malik



Ontario
Ministry of
Labour

O.H.B. File No 16978J

I.H.S.B. File No 325-000

Occupational Health Branch



FIELD VISIT REPORT

ITEM #13

01

Date: January 11, 1979

From: O.P. Malik, Ph.D., P.

Plant Bendix Automotive of Canada Ltd.

Address 945 Prince Road
Windsor, Ontario
N8Y 4S3

Contact: Mr. Gordon Detenbeck
Manager, Health & Safety

Mr. Jack McCann
U.A.W. 195, Safety Representative

Hazard Asbestos

Requested by: I.H.S.B.

Date of Request: October 23, 1978

Accompanied by: Mr. Les Barker

Date of Visit: November 23, 1978

Copies to: Dr. P.L. Pelnear
Mr. J. McNair (3)
Mr. S. Morton
Mr. H. Todd
Mr. Gordon Detenbeck

Abstract

Brake shoes containing asbestos brake linings are used to assemble complete braking system for automobiles at the above referred plant. A small amount of asbestos fibres become loose during handling of the brake shoes. It is likely that some of these fibres could become airborne and be a source of potential hazard. However, personal and area sampling for asbestos will be carried out by this Branch to measure the airborne concentration.

The hazard is assessed to be minimal and no directions are suggested to be issued at the present time. Recommendation is made to practise vacuum cleaning instead of dry sweeping.



Bendix Automotive of Canada Ltd.
January 11, 1979

General:

Bendix Automotive of Canada Ltd. has two plants in Windsor, the Argyle Avenue plant and the Prince Road plant. At the Argyle plant, brake linings are drilled, riveted to brake shoes and turned on grinding wheels to produce tapered ends. The finished product stacked in incline chutes is shipped to the Prince Road plant where complete brakes are assembled. At the Prince Road plant, the maximum handling of asbestos brake lining is restricted to three categories of employees: the employee transferring brake shoes from the chute to the conveyor; the pin liner operator and the end of line inspector.

A total of 300 employees work at this plant but only about 100 of them handle asbestos brake shoes.

Comments:

1. A small amount of dust containing asbestos accumulates at the bottom of each chute. This means that the operator transferring brakes from the chute could be exposed to some asbestos fibres. To measure the airborne concentration of asbestos, area and personal sampling will be carried out by this branch.
2. A small amount of what appeared to be very fine dust containing some asbestos was observed on the work benches. At these locations, the exposure is expected to be low but will be quantified by air sampling to be carried out by this branch.
3. The chutes, benches and floor in this area are supposed to be vacuum cleaned, but at the time of the visit the vacuum cleaner was out of order and the dust was being swept dry.

Recommendations:

Although the airborne concentration of asbestos is not expected to exceed the Ontario interim standard of 2 fibres/cc, the best practice is to keep this concentration as low as possible. Vacuum cleaning is hence recommended and the dry sweeping should be discontinued.

Bendix Automotive of Canada Ltd.
January 11, 1979

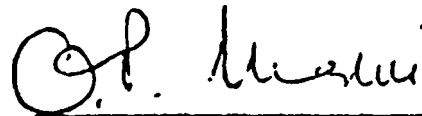
Further action by the Occupational Health Branch:

Area and personal sampling for asbestos will be carried out at the following locations:

1. chute containing asbestos lined brake shoes
2. the pin liner (pin plate)
3. the inspection station

Directions suggested to be issued:

No directions are suggested to be issued at this time. Further comments will be made after the air sampling results are known.



O.P. Malik, Ph.D., P. Eng.

OPM:ss

The present Ontario standard for asbestos fibres is: 2 fibres greater than 5 micrometers in length per cubic centimeter (cc) of air. No of the eight samples were above this limit.

Observations

Housekeeping at the time of my visit was fair.

The dust collector is outside, adjacent to the grinding room.

The doors to the enclosure of the dust collector, containing the waste box, appeared to be in need of repairs.

At the time of sampling, the waste box was only half full. Normally it is from three quarters full to full, before it is changed.

Wind direction was out of the west at approximately 5 to 10 knots, with no precipitation.

CR:lm

C. Rhodes