BFGoodrich INTER-ORGANIZATION CORRESPONDENCE

TO	FIELD POINT OR DEPT. & BLDG. NO.	DATE YOUR LETTER
J. A. Brooks	Shawinigan	
FROM	FIELD POINT OR DEPT. & BLDG. NO.	DATE THIS LETTER
T. S. Bialke	Akron - D/0020, 5-H	9-1-81

SUBJECT

Shawinigan Industrial Hygiene Survey

An industrial hygiene survey was conducted at the Shawinigan plant on July 21-24, 1981. No excessive exposures to vinyl chloride, lead or total nuisance dust were found during the survey period.

Noise control efforts in the cubing operations are still being circumvented by employees tying noise curtains away from cuber room openings.

The plant's hearing protection and respirator protection training and enforcement programs need review.

I want to thank J.P. Gregoire for his assistance in making the survey productive and interesting and for making my visit to Shawinigan enjoyable.

T. S. Bialke

T. S. Bialke

v

cc: J.P. Gregoire
2 Forcier / ~~P. Plante~~
E.C.Martinelli/E.W.Harrington
P.J.Weaver/D.A.Brooks
H.Waltemate
W.C.Becker
R.E. Healey

25943001

BFG45434

RECOMMENDATIONS:

1. Ensure that hearing protection required per BFG OHP 5.05 is being worn where required and that all hearing protection is worn properly.

2. Keep cuber room doors closed on all shifts.

3. Install permanent doors to FCM line cuber room.

4. Until FCM line cuber enclosure openings are reengineered per recommendation #3 above, ensure that Koroclear strips hung for noise control are kept hanging free and not tied back.

5. Purchase three new low flow pumps to be used for personnel exposure monitoring (see Discussion for approved types).

6. Replace all flasher tubes.

7. Utilize the vacuum system for line changeover more effectively and wear respirators during clean-up.

8. Prohibit smoking in compounding area.

9. Ensure that respirators for dust exposures are worn properly.

10. Improve ventilation over the C-9 blender and ensure that the ventilation provided is properly used.

11. Issue a monthly report detailing the plant's environmental health activities (see Discussion for details of what to include).

DISCUSSION:

The BFGoodrich Environmental Health Department recently revised the occupational health policy on noise, requiring that all areas greater than 85 dBA be posted as noise hazardous with hearing protection required to be worn. The plant environmental department has begun to identify areas for posting. Currently there are areas within the plant that are posted as noise hazardous, i.e. over 90 dBA, where hearing protection is required. Among these are the cuber areas and 4th floor poly building. In both areas employees were observed who were working and not wearing hearing protection or wearing it improperly. Two maintenance employees in the poly building were not wearing hearing protection in a posted area and a cuber operator had ear plugs in, but they were inserted improperly.

For the BFG hearing conservation program to work properly, it is extremely important that where hearing protection is required, that it is worn and worn properly. Employees are to be counseled during their annual audiogram as to the need for hearing protection, how it is to be worn and why it must be worn properly.

Discussion (con't)

Doors in the C-8 cuber line were found closed on the 2nd (day) shift, but open on the 3rd (evening) shift. During my survey in November 1979, cuber room doors were found open on the day shift. The doors to the cuber room must be kept closed on all shifts. The 1979 IH survey identified a need for replacing the Koroclear strips used for noise control around the FMC line cuber. During this survey, as in the previous survey, the Koroclear strips were found pulled back out of the way. These strips need to be replaced with a rigid enclosure or door which must be kept closed. Until they are replaced, the Koroclear strips must be kept in place. I am enclosing product information on prefabricated noise enclosures with doors.

During this survey I used the plant's Micronaire pumps to obtain VCL personnel air samples. On two occasions the pumps failed to maintain the desired flow rate for the entire shift. The Micronaire pumps are old and have provided excellent service, but they have outlived their life expectancy and need to be replaced with suitable low flow pumps. The duPont Company makes a low flow, constant flow pump, Model P-200 for organic vapor monitoring which is adjustable over a range of 50-200 cc/min. (per company literature). However, it can be set to operate in the 10-25 cc/min. range when used with the PMCC flasher tubes for VCL personnel air monitoring. I recommend that Shawinigan purchase three duPont P-200 pumps.

The PMCC flasher tubes also need to be replaced. After repeated use the tubes retain a "memory" and do not flash off cleanly, in turn leaving a residue contamination which, after a time, can interfere with the VCL analysis.

Table I contains the results of air monitoring conducted at Shawinigan for vinyl chloride, total dust, lead, cadmium, antimony and plasticizers, the plasticizers being Di(2-ethylhexyl phthalate) and diisodecyl phthalate. EHP was found in two samples, one personal monitor on the C-9 millman and the other directly over the C-9 mill. Levels detected are not in excess of the current TLV of 5 mg/M^3.

All vinyl chloride results are well within acceptable limits. No results were above 0.5 ppm.

Lead, antimony and cadmium results are also within acceptable Quebec limits. The highest level measured for lead was on a C-9 blender operator. This job (C-9 blender operator) was not monitored during the weighing up of the lead stabilizer so the blender operator's exposure may be higher. It should be noted that in the past blood levels on employees in this job class have shown lead levels high enough that work restrictions were in order. Various equipment conditions and work practices contribute to the C-9 blender operator's exposure that, when combined, could cause an excessive environmental exposure to lead that could lead to elevated blood lead levels.

Discussion (con't)

Cigarettes were observed laying open on the C-9 blender operator's desk which is situated 10 feet or so from the blender opening where the load is used. Cigarettes and smoking must not be permitted in the compounding area. The blender operator was wearing a 3M 9900 toxic dust respirator, but was not wearing it properly. The lower strap had been removed. Without the lower strap positioned properly, the respirator does not provide optimum protection. To be effective respirators must be worn properly. Periodic trainig and enforcement of the respirator policy must be conducted. The opening to the blender has a hood, but the air flow across the face was barely detectable. The system needs to be upgraded to provide 100 fpm across the open face of the hood to be effective in reducing lead exposures. Providing effective ventilation is one thing, using it properly is another. The C-9 blender operator was observed adding raw materials through an opening to the blender that had no ventilation hood over it, directly across from the ventilated material addition point.

A line changeover was observed; as in the past compressed air was being used to blow out the PVC mixing and milling equipment. This practice created a large amount of airborne dust. The operator was not wearing a respirator.

The vacuum system provided to the compounding area must be used to clean up loose dusty material. Compressed air must not be used to blow about loose, dry, dusty pigments and powders. Respirators must be worn during all clean up operations involving dust materials. The 3M 9900 is adequate.

Total dust monitoring on the C-8 weighman and powder line CIH operator do not indicate any problem.

The plant needs to issue a monthly occupational health report detailing environmental health activities. This report should include status of engineering projects designed to eliminate exposure problems, results of personnel monitoring, causes of overexposures, plans to eliminate or reduce exposures and summary of area monitoring excursion types. The attached Henry report can be used as an example of a suitable format.

TSB

TABLE I.

PERSONNEL AIR MONITORING RESULTS
Shawinigan - 7/21 - 7/24/81

Employee Name	Location	Job Class	Sample Time (min.)	Shift	Results
VINYL CHLORIDE					
E.LaRoche (7/22)	Poly Bldg.	Auxillary Oper.	360	2	0.4 ppm
A.Deschamps (7/22)	" "	Recovery Oper.	308	2	0.3 "
A.Deschamps (7/23)	" "	" "	300	2	0.3 "
B.Brodeur	" "	Charge Oper.	300	2	0.3 "
LEAD, ANTIMONY, CADMIUM					
J.Pailles (7/21)	Compounding	C-8F weighman	365	3	1.1 ug/M^3 Pb 2.2 " Cd 5.5 " Sb
R.Auger (7/22)	"	C-9 Blender Oper.	360	2	24.6 " Pb 0.2 " Cd 5.0 " Sb
R.Auger (7/23)	"	"	362	2	56.6 " Pb 0.2 " Cd 5.0 " Sb
TOTAL DUST					
J.Deschenes (7/22)	"	C-8 weighman	360	2	5.99 mg/M^3
C.Lefebvre	"	Powder Line CIH	360	2	4.2 "
PLASTICIZER					
J.Thibodeau (7/21)	Cpdg. Bldg.	Millman, C-9 line	150	2	0.11 mg/M^3 EHP 0.05 " DIDP
General Air over C-9 Mill			290		0.15 " EHP 0.05 " DIDP
H.Arcard (7/22)	Cpdg. Bldg.	C-9 Millman	360	3	0.05 " EHP
P.DuPont (7/22)	" "	C-9 Mill Oper.	230	3	0.05 " EHP

EHP = Di(2-ethylhexyl phthalate)
DIDP = Diisodecyl phahalate

25943005

BFG45438