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DAK-EBS-Return

UNION CARBIDE

INTERNAL CORRESPONDENCE

APR 9 1973

UCC - CALIFORNIA
KING CITY, CA.

UNION CARBIDE CORPORATION • 270 PARK AVENUE, NEW YORK, NEW YORK 10017

To (Name) Mr. F. H. Larrison
Division Mining & Metals Division
Location King City, CA 93930

Date April 2, 1973

Originating Dept. Medical Department

Answering letter date

Copy to Mr. J. W. Rawlings
Mr. E. A. Piersall
Dr. J. J. Welsh/Dr. K. S. Lane

Subject **CONFIDENTIAL**

Dear Mr. Larrison:

Attached are the tabulated findings of my survey of airborne fiber (5.0 microns or longer in length) in the work environment at King City, March 20, 21, 1973. No air samples were obtained at locations outside the buildings during this visit owing to nearly continuous rain during the period.

During the first day (3/20), there was considerable variation in the products being bagged in the main bagger area and also variation in the use or non-use of the palletizer. Consequently, the air samples reflect broad changes in operations. During the second day (3/21), the operations stayed constant.

The notation palletizer-bagger operator or vice versa is used to describe the periodic trade-off in jobs between the two individuals during the day. The notation, bagger-handler or vice versa, reflects a similar job trade but in this case bags were manually palletized at the end of the conveyor in the wet circuit area.

While the sample periods do not cover a complete day, I believe it reasonable to make estimates of the weighted exposures as follows:

3/20	Bagger-palletizer operator-handler.	4.5 4.0
3/21	Bagger-handler.	8.0
3/20	Resin-grade bagger operator.	1.6
3/21	Resin-grade bagger operator.	1.8
Wet circuit operators (including press area)		4.0

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As you will note, and in line with our discussions, it is questionable if we can reasonably predict, except with a broad range, the levels of fiber that might be encountered in the main bagger area. Consequently, at present, the weighted exposure of bagger operators is similarly difficult to predict. For the present, at least, respirators must be worn in this area.

For the wet circuit areas, it seems reasonable to predict that fiber concentration as a weighted average will be less than 5.0/ml, and probably less than 2.0/ml. Of course, losses of dust from a dry ore pile or losses of dust through open doors to the bagger areas on windy days could change the picture. These losses will require close control.

In line with our discussion during the visit, I recommend that plans be started to provide a clothing change area that will allow separation of the work clothes storage and change point from the street clothes storage and change. Provision should be retained, of course, for vacuum cleaning of dusty clothing and shoes to reduce spread of fiber as much as possible.

I also recommend that at the same time, provision be made for a lunch area that is separated from the work area. Both of these areas (change and lunch) will probably be required by regulation, shortly.

Yours very truly,

Paul W. McDaniel

Paul W. McDaniel
Industrial Hygiene Engineer

PWM:mc

Enclosure

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Fiber Counts

Mining & Metals Division

3/20 - 3/21/73

Sample Identification	Date	Sample Type	Time	Fibers per ml	Remarks
Palletizer-bagger operator	3/20	PA	9:00-11:30 A	6.3	Bagging and palletizing Imco open fiber. Some problems with conveyor.
Bagger-palletizer operator	3/20	PA	9:00-11:30 A	5.8	
General bagger-palletizer area	3/20	GA	9:00-11:30 A	2.9	
Bagger-handler	3/20	PA	11:40- 1:30 P	2.4	Bagging and handling Imco open fiber and pellets. Palletizer not used. Bags manually handled at end of conveyor.
Handler-bagger	3/20	PA	11:41- 1:31 P	1.9	
General bagger area	3/20	GA	11:37- 1:20 P	1.9	During bagging pellets and Imco open fiber. Palletizer down.
" " "	3/20	GA	2:38P-4:20 P	3.5	
Discharge end of conveyor during manual handling of bags.	3/20	GA	1:30P-2:50 P	1.4	Pellets and Imco.
Shifter's office.	3/20	GA	11:50- 1:25 P	0.3	Same conditions as generally shown above.
Wet circuit areas	3/20	GA	9:30-11:35 A	0.2	See above for conditions.
" " "	3/20	GA	11:50- 2:02 P	0.5	" " " "
" " "	3/20	GA	2:30- 4:00 P	0.3	" " " "
Resin Grade Area					
Bagger operator	3/20	PA	1:30- 3:23 P	1.5	Normal bagging operation.
		PA	3:25- 4:03 P	1.7	
General area	3/20	GA	1:40- 3:50 P	1.6	

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Bagger-Handler	3/21	PA
	3/21	PA
	3/21	PA
Bagger area general	3/21	GA
	3/21	GA
	3/21	GA
Discharge end of bag conveyor (in wet circuit area)	3/21	GA
	3/21	GA
	3/21	GA
Resin Grade Area		
Bagger area	3/21	PA
		PA
		PA

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8:20- 9:40 A	11.5	Bagging and handling Sylodex
9:42-10:39 A	5.2	RG. Some bags broken. Palleti-
10:39-12:02 A	6.8	zer down.
8:23-10:04 A	5.0	Same as above.
10:05-11:12 A	3.7	
11:13-12:15 A	3.3	
8:28- 9:58 A	2.7	Same as above.
9:59-11:05 A	7.1	
11:06-12:10 A	4.4	
8:40-10:00 A	1.5	Bagging resin grade 244.
10:01-11:29 A	1.0	
11:30-12:12 A	3.3	