PLAINTIFF'S EXHIBIT
CSR-319

(209)

KALGOORLIE.

29th December, 1961.

District Inspector of Mines
(Ventilation)
Mines Department,

KALGOORLIE.

Ventilation - Australian Blue Asbestos Limited - Wittenoom

The following is a summary of work done and observations made during my recent visit to the Colonial Mine at Wittenoom. The object of this visit was to assist the Ventilation Officer in all phases of underground ventilation and to take dust samples in various working areas through-out the mine to compare with samples taken by yourself during October.

The average of samples taken is as follows:

Main Adit	240 p.p.c.c.
Day Shift	310 p.p.c.c.
Afternoon Shift	220 p.p.c.c.

These counts show an appreciable drop from your average counts for October which were as follows:

Main Adit	480 p.p.c.c.
Day Shift	430 p.p.c.c.
Afternoon Shift	750 p.p.c.c. (3 samples-1000+)

Apart from isolated cases of dirt not being watered down before scraping operations commenced, conditions generally in the mine were satisfactory. Owing to dust samples being appreciably higher on the west side of the transfer belt in the Main Adit, an experimental coke filter was installed at the transfer belt in an effort to capture the dust being liberated from this point. The filter consisted of a 16" Electric Fan with 30" of 15" venturi ducting and attached to the end of the ducting a coke bed comprising of a cylinder 18" in diameter and 9" thick, made of ¼" screen. The dust picked up by the fan had to filter through the wet coke before being discharged into the Adit.

This fan was left going for a week and at various times samples were taken with the Konimeter, before the fan and at the discharge side of the coke bed.

The average of samples taken were as follows:

Before the Fan	330 p.p.c.c.
Discharge of coke bed	140 p.p.c.c.

These figures indicate that approximately 58% of the dust particles were being impregnated into the coke. The coke was brought to the surface at the end of a week and when examined it could be seen that a large amount of dust and fibre had been collected. It is interesting to note that although fibre was present in the coke in various lengths, no fibre showed up in any samples taken with the Konimeter. Further experimental work is to be done by the Ventilation Officer with the view of installing filters at the Belt Transfer and Rose Feeders in the Main Adit, the Grizzleys on the haulage levels and at the stope faces if the "Longwall" method of mining is to be adopted.

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Much work has been done to separate the upper and lower seam workings for ventilation purposes. All manways and chutes on the 1 level have been bratticed over and work is progressing satisfactorily on the 2, 3, 4 and 5 levels. Stope drives have been commenced from 22 N on the 2 level to break into 32 N on the 3 level and 12 N on the 1 level to ensure that all lower seam workings are connected. Every possible step is being taken by the underground staff to have the Ventilation of the upper and lower seams independent of each other by the end of January, 1962.

The counting of dust samples is now done by the Ventilation Officer. Although the two girls who were assisting him are conscientious and efficient they fall short of the standard required for the counting of dust particles as the counts set out below indicate.

Ventilation Officers Count	Girls Count
348 p.p.c.c.	68 p.p.c.c.
528 "	152 "
120 "	50 "
206 "	42 "
90 "	38 "
490 "	328 "

As can be seen by the above counts the discrepancy is too great for the figures to be of any value. The above counts were taken at random from a slide of thirty samples and indicate the lack of interest and concentration by the girls.

On the afternoon of December 15th a strong smell of carbon gas was detected on the 5, 6, and 7 levels. It was evident that it was coming from the compressed air line. I was informed that the air man had caught alight and gases given off by the fire were being pumped straight into the mine. Apparently this is the third time it has occurred in the past few months and was so bad on the previous occasion that the miners had to be withdrawn from the stopes with two men becoming violently ill. While the gases given off may or may not prove fatal, the pollution of the mine air circuit by these gases is most undesireable and should be remedied as quickly as possible. The fire is caused by the overheating of the engines which in turn ignites the sludge laying on the bottom of the Air Main. A receiver is to be installed adjacent to the power house to prevent sludge settling in the Air Main itself.

Treatment Plant.

Conditions in the mill at the beginning of this visit were very dusty and could be termed "Critical". Three separate inspections were made of the mill, two during day shift and one Afternoon Shift. The average counts for the mill are set out below.

5th Dec. 1961	Day Shift	620 p.p.c.c.
12th " "	Afternoon Shift	610 p.p.c.c.
20th " "	Day Shift	330 p.p.c.c.

Much fibre was noticed in the samples, in particular around the Nordberg screens, Control Boards and the Mine transfer chute.

It will be noted that the last average of 330 p.p.c.c. it considerably lower than the other two, this was partly due to the strong easterly wind blowing on that particular day. The main source of dust liberation was coming from the transfer belts underneath the screens. In this area there was a large amount of spillage and a high percentage of the ducting was in need of repair. Conditions in the crushing section were reasonably good and work is continuing in an endeavour to trap the dust. The exhaust system which is servicing No. 2 Adit is inadequate and dust samples which were taken there were very high, with Fibre visible

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on the slides. Much dust is still being liberated from the tailings bin and tailings dump and with the wind in the right direction finds its way into the mine workings via the adits.

Work which has been, and will be done to help combat the dust nuisance in the mill and the surrounding area is:

1. The installing of roller shutters in the main doorway.
2. Total enclosure of the Tailings bin and air water sprays installed to further settle the dust.
3. Complete spraying of the tailings dump with Calcium Chloride.
4. Total enclosure of all belt transfer points where ever possible and the renewing of ducting.
5. An independent exhaust system for No. 2 Adit comprising of a 15" Electric fan with either 15 or 18 inch tin ducting.

When all this work has been completed I am confident that conditions in the mill will be greatly improved.

Attached, please find tabulation of dust counts and temperatures recorded during this visit.

ASSISTANT INSPECTOR OF MINES

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