

FILE NAME: Colonial Sugar Refinery (CSR)

DATE: 1962 Apr 11

DOC#: CSR096

DOCUMENT DESCRIPTION: Govt Inspection Results - Ventilation -
Australian Blue Asbestos Ltd - Wittenoom - High Dust Counts &
Failure to Address the Issue

220

64

KALGOORLIE.

The State Mining Engineer,
Mines Department,

11th April, 1962.

PERTH.

Ventilation - Australian Blue Asbestos Ltd.
Wittenoom.

Herewith in duplicate a report by Inspector
Simmons.

Mr. Simmons has summed up concisely in his opening
paragraph under the heading 'General' on page 4.

Visual inspections alone are useless as regards
ventilation conditions.

There is no doubt that the Mine Administration is
making some attempt to improve conditions and that the
underground department has taken the lead in this direction
with the result that in the past twelve months general
underground mining conditions have improved beyond my
expectations. However, the crux of the matter is ventilation.

The Underground Ventilation circuits are being
approached in a realistic manner and when the work of
isolating the ventilation circuits in both the upper and
lower seams is completed far better conditions will prevail.

It appears to me that although the Management is
making some attempt to control dust generated in the Milling
Section they are not approaching the situation in the correct
manner. The inability of the present dust collecting system
is well known to all and Mr. Simmons says that dust is being
generated at all points, yet we also note that Mr. Simmons
remarks on increased through-put. It must follow that more
dust will be generated.

I cannot agree with Inspector Simmons remarks in
paragraph 2, page 2 of his report. "I fail to see total
and concerted effort on the part of the Management and the
Supervisors in the matter of improving conditions."

A Study of the Tabulation of Dust Counts shows the
following :-

<u>Count.</u>	<u>Remarks.</u>
370	100' from ducting
1000+	Boring-80' from ducting
370	Ducting extended to face.
220	Boring - 80' from ducting
300	Preparing to bore - dead pocket-no ventilation
520	Boring dead pocket-no ventilation
350	Ducting extended towards face
1000+	Dead pocket-no ventilation, dirt dry & dusty
70	Vent line split, duct damaged and 40' from face delivery poor.
410	Dirt dry-vent. duct was extended and dirt water down before work was commenced.
150	Duct 70' from face
170	Delivery to face negligible.
1000+	Duct 150' from face.

PLAINTIFF'S
EXHIBIT

104760

PLACED - Sydney, N. I.

These bad conditions were found by an Inspector when everyone in the mine would know he was present. It must follow that such bad conditions are common practice, and must be known to the Management and Supervisors.

I must agree that the employees are not co-operating but at the same time I must also insist that it is the Management's responsibility through the Supervisors to maintain Clean Housekeeping and to settle domestic problems.

If the discrepancies before tabulated are found by an Inspector, they would be more numerous than he was absent.

It may be that the number of Supervisors is insufficient and that the Supervisors cannot maintain correct or adequate contact with their men; this matter will be checked. However, if a Supervisor finds continued unsafe practice he should check on the matter.

As I have, in the past often stated, Inspectors of Mines are not to carry out the duties of Underground Supervisors. It is the Manager's responsibility to enforce the Requirements of the Mines Regulation Act and Regulations on his mine, and if his policy is insufficient then we will have to Act to ensure that he meets his obligations correctly.

I intend to maintain close watch on the position and will myself make a visit to Wittenoom within reasonable time.

SENIOR INSPECTOR OF MINES.

KALGOORLIE. XXXXX 6th April.

62

The Senior Inspector of Mines,
Mines Department,
KALGOORLIE.

Ventilation - Australian Blue Asbestos Ltd.
Colonial Mine - Wittenoom.

Accompanied by Assistant Inspector Murphy I carried on an inspection during day shift. A check inspection during one afternoon shift was done in order to gain an overall picture, also a trend if any. A partial airflow survey of the Colonial Mine was done. As the work of isolating the upper and lower seam circuits is not complete, no value could be gained from a complete survey. An inspection of the treatment plant was also carried on.

Underground:

Visually, conditions throughout the mine generally appear to be at least approaching the satisfactory level. The recorded dust counts, however, still show above normal concentrations. This is particularly evident on afternoon shift when the only bad areas were 41 N. and 42 N. lower seam, but from the recorded dust counts all areas visited showed high dust concentrations.

The following figures are of interest:

Average dust count on day shift for June	1960 - 230 p.p.c.
" " " " " " " " " " " "	November, 1960 - 180 p.p.c.
" " " " " " " " " " " "	(2 1/2 hour break).
" " " " " " " " " " " "	August, 1961 - 420 p.p.c.
" " " " " " " " " " " "	March, 1962 - 370 p.p.c.
" " " " " " " " " " " "	afternoon " November, 1960 - 110 p.p.c.
" " " " " " " " " " " "	(2 1/2 hour break).
" " " " " " " " " " " "	August, 1961 - 630 p.p.c.

The following figures are those obtained from our check points. i.e. An average cross-section of the working conditions.

Average dust count on afternoon shift for October, 1961	- 750
" " " " " " " " " " " "	p.p.c.
" " " " " " " " " " " "	December, 1961 - 275
" " " " " " " " " " " "	p.p.c.
" " " " " " " " " " " "	March, 1962 - 660
" " " " " " " " " " " "	p.p.c.
" " " " " " " " " " " "	day " December, 1961 - 305
" " " " " " " " " " " "	p.p.c.

From the average dust count figures it can be seen that the lowest results were obtained during the 2 1/2 hour break period.

This is understandable for afternoon shift, but seems strange how the day shift should be affected, unless it was coincidence? Also, noticeable is the low counts obtained during Assistant Inspector Loxton's stay in December, 1961. 61

It was pleasing to note the efforts on the Management's part to improve conditions, unfortunately they are not receiving the employee's assistance and it appears that the inspectors must take a strong line of action against the miners concerned. Now that the supervisors are more than interested in conditions and are doing their utmost, if we do not strongly support them in their duties then we may lose their interest and so cause conditions to again deteriorate.

A man has been delegated to keep the bench and Main Adit watered down and no doubt this has decreased the dust liberated from these areas. The Main Adit appeared quite clear on all occasions bar one. This one exception was caused by dry dirt being scraped into the No. 2 Level Ross Chain Feeder. A good airflow is now maintained down the Main Adit, its flushing action keeps the adit clean. A volume of 30,000 cums was found to be passing down the Main Adit. This volume is variable, however, and is mostly around the 15,000 cums region according to the Ventilation Officers.

Wherever possible, stoping faces are being worked up the dip instead of down the dip as before. After consultation with the Underground Manager and staff regarding a complete abandonment of down the dip stoping, and after viewing conditions during the inspection, it was decided that it was impracticable at present, owing to development being behind, to abandon down the dip stoping. At present all stoping faces are adequately ventilated, mostly by a through airway, but where no airway exists then a Meco E.F. 4 A. Electric Fan with 15" ducting is provided. The Underground Manager has agreed to work all future stoping faces up the dip whenever possible.

A door has been made and is ready to instal at the Main Adit entrance. A trap door is incorporated so that at the change of shifts, when the door is closed and locked, men can still pass through. During the shift the door will be left open and so allow the Main Adit to downcast. At the change of shifts the door will be closed and locked, thus causing more air to be drawn into the bottom of the mine and so allow a larger volume to pass into the stopes from the lower levels.

Air Measurements:

Ventilation of this mine is now carried on by two Richardson 60 A.F. Class A axial Flow Fans. One is still exhausting at the cliff face on the upper seam, but is actually drawing air from both seams at present. The other fan is operating from No. 5 level and is positioned just south of the 54 S. surface rise which forms the only intake airway for this fan.

Work is still being done in an endeavour to completely isolate the two seams and so create two independent airways. Once completed the fan at the cliff opening will exhaust air from the lower seam whilst the fan on No. 5 level will force air through the upper seam.

From air measurements, directions and observations made during this inspection the idea of isolating the two seams and so provide independent airways is no longer a dream, but is almost a proved and working system. The fan on No. 5 level is at present only passing 57,000 cums. Once all brattices etc. have been completed it will be speeded up to its full capacity.

The total volume of air passing through the mine was measured at 112,000 cunins of which 66,500 cunins ventilates the lower seam and 45,500 cunins ventilates the upper seam. It is hoped once both fans are working at full capacity to have an excess of 180,000 cunins passing through the mine of which both seams will receive an equal amount.

The recorded volumes measured at the Main points during this visit were as follows:

Main Adit	Intake	30,000 cunins
No. 1 level Cliff opening	"	1,000 "
No. 2 level Cliff opening	"	2,000 "
No. 3 level Cliff opening	"	2,000 "
No. 4 level Cliff opening	"	11,000 "
No. 5 level Surface Rise	"	57,000 "
TOTAL		103,000 cunins
Main Surface Fan	Exhaust	98,500 cunins
Neco E.P. 6 Fan	"	13,500 "
TOTAL		112,000 cunins

The Neco E.P. 6 Electric Fan exhausting at 11 S. is only a temporary installation. It was found necessary to place it there because of leakages in the manway brattices between upper and lower seams. Before its installation the air was downcasting to the levels via manways etc., but once this fan began operating its influence overcame most troubles. Once all brattices etc. are satisfactory this fan will not be required. The reason behind the poor brattices etc. was that over the holidays supervision was short, also Mr. Mulholland was on holidays, and before he returned the separate circuits were brought into being with the aforementioned troubles. Upon returning to work Mr. Mulholland immediately appraised the situation and set about rectifying same. At the time of our visit only a small amount of work remained to complete the programme.

The following is the proposed airways for each seam.

Upper Seam - Under the influence of No. 5 level fan air will be drawn down 54 S. Surface Rise and will then be distributed along Nos. 5, 6 and 7 levels from where it passes up manways etc. to the upper seam workings.

Lower Seam - Under the influence of the Surface Exhaust Fan air will be drawn into the mine via the following points:
Main Adit Nos. 3 and 4 level Cliff openings. It then passes up manways etc. to the lower seam workings. By the installation of brattices in the manways and ore passes above the lower seam, this air is prevented from entering the upper seam workings.

Treatment Plant:

Conditions in the mill appear consistent with previous inspections. The crushing section appeared more dust free this time than previous times.

Average dust counts recorded are as follows:

59

	<u>Overhaul</u>	<u>Crushing Section</u>	<u>Mill Section</u>
June 1960	300 p.p.c.c.	280 p.p.c.c.	320 p.p.c.c.
September 1960	420 p.p.c.c.	430 p.p.c.c.	410 p.p.c.c.
November 1960	460 p.p.c.c.	440 p.p.c.c.	480 p.p.c.c.
August 1961	390 p.p.c.c.	460 p.p.c.c.	320 p.p.c.c.
December 1961	510 p.p.c.c.	435 p.p.c.c.	620 p.p.c.c.
March 1962	300 p.p.c.c.	250 p.p.c.c.	380 p.p.c.c.

Although the dust count is lower this time it could possibly be discarded altogether. Unfortunately we inspected the mill on Friday morning, 23rd March. The mill was stopped when we arrived and apparently had been so since 5 a.m. The mill was started at approximately 10.00 a.m. and we started the inspection at approximately 10.30 a.m. It is therefore probable that the true picture of the mill, particularly the crushing section was distorted so as to favour better conditions. The crushing section appeared better this time than it has ever done, but the men working in it claim it is dustier than ever.

The Management are definitely trying to control the dust and are spending much money on it, but owing to increased through-put, and the in-ability of the present dust collection system to handle it, success seems highly improbable.

An experimental bag type filter is to be tried in the near future and it is to be hoped this proves a success. Until the dust is collected at its source however, no filter arrangement outside can do much for inside the mill. It is quite obvious most dust is created at all points within the mill, and at various times is joined by dust from outside sources.

Men through-out the mill generally seem to be wearing masks, especially through-out the crushing section.

On our next visit to this mine an inspection of the mill will be done during the initial part of our stay and possibly another one or two checks before leaving the district.

General:

As stated earlier conditions through-out the mine appear much better than before. On afternoon shift conditions appeared good except for one area. Previously thick smoke accompanied by the characteristic smell of fumes was present through-out the mine on afternoon shift. The men do not have these bad conditions to work in now, but the dust hazard is still there as can be seen from the recorded dust counts. It is therefore useless and misleading for anyone to gauge the conditions from visual observations only. The results of this inspection have proved this beyond all doubt, and not until the recorded dust counts are lowered to a satisfactory level can we be satisfied with conditions on this mine.

Some asbestos was seen in the underground samples, whereas much fibre was seen in the mill samples, especially those taken in the post-crushing areas. If the mill walls, beams etc were to be regularly cleaned down perhaps some of the dust could be stopped inside the mill.

The experimental stoping block is ready for the "longwall method" of stoping to be tried. No definite date has been nominated for the stoping to commence, but now the Underground Manager is back from holidays operations may soon be under way.

The ventilation officer (Mr. Mulholland) is continuing his excellent work and the problems should become lesser in magnitude under his influence. It is pleasing to report the excellent co-operation being given us by all responsible mine personnel.


DISTRICT INSPECTOR OF MINES
(Ventilation)