

Special Inspector of Mines (Ventilation),
Mines Department,
Kalgoorlie.

JMcA/MJ

OH/520

Mr. A. Ibbotson,
District Inspector of Mines,
PORT HEDLAND.

30th November, 1964

Dear Sir,

Asbestos Dust

Dr. Letham referred to me your query regarding the use of asbestos mine tailings for road surfacing around Marble Bar.

This practice must cease. The use of asbestos mine tailings for purposes where the general public may be exposed cannot be permitted.

If you have any difficulty in stopping the shire council, let me know and action can probably be taken under the Health Act.

This matter is important and I would be grateful for word from you that the practice has ceased. Thank you for drawing attention to it.

Details in regard to the fibre/size of quartz content will be obtained and a copy sent to you later.

Regards,

Yours faithfully,

J. McNulty
CHEST PHYSICIAN
OCCUPATIONAL HEALTH

PLAINTIFF'S
EXHIBIT
WV-04458

PLAINTIFF'S
EXHIBIT

107220

Dr. H.M. Rennie,
Macquarie Chambers,
183 Macquarie Street,
SYDNEY.

8th March, 1963.

Dear Dr. Rennie,

Thank you again.

The enclosed copy of a letter from Dr. Wagner may interest you. He is in error in assuming that there have been three other cases of mesothelioma associated with asbestos exposure.

The reference to the possible slightness of exposure especially in childhood is one that has always worried me and why I have always decried the practice of using mill tailings for laying paths etc., in the township.

For the rest of the letter, naturally any help or assistance would be very welcome and the Company has certainly been quite co-operative in so far as investigation, at least, is concerned. I doubt that there would be any need for an approach to the Federal authorities and the co-operation of the State can be taken for granted.

Don Letham is in Sydney now staying at St. Paul's College and he would, I know, be very pleased to have the opportunity of discussing the problem with you.

Kind regards,

Yours sincerely,

J. McNulty,
ACT./PHYSICIAN
OCCUPATIONAL HEALTH.

H. MAYNARD RENNIE
F.R.C.P. (LOND.) F.R.S.C.P.
TELEPHONE: BW 7711
(AFTER 4 P.M.): XL 2540

MACQUARIE CHAMBERS
183 MACQUARIE STREET.
SYDNEY

25th February, 1963.

Dr. Bruce Hunt,
37 Ord Street,
WEST PERTH. W.A.

Dear Bruce,

Many thanks for your note of the 21st February. I am deeply distressed to know that you cannot make it to the Council Meeting but I fully appreciate the reasons that you have given. We are all very sad about this and shall miss you greatly.

Re Wittenoom - I fully agree that there is need for further action to be taken. It is about a year ago now when I first took this matter up with the Company and they claimed that they had made quite a number of alterations which should prove helpful in solving the problem. At that point in time it was not, therefore, possible to do more than to place all the bitter facts before them, which I did. However, I have initiated this later move by writing to McNulty and also asking him to get a current report from Letham on the position so that I may approach the Company again. I gather that the conditions are, in fact, worse than they were and this gives me a tremendous pull. I will let you know what goes on.

Warmest greetings,

Yours sincerely,

Handwritten signature
H. MAYNARD RENNIE

Wittensson J.W.

21st February, 1962.

H. Maynard Rennie, Esq., F.R.C.P.,
183, Macquarie Street,
SYDNEY N.S.W.

My dear Ted,

I started work a week or two ago, only part-time, and have just received a letter from Dr. McNulty our old friend from Kalgoorlie. McNulty is apparently still very unhappy about Wittensson and writes to me as follows:- "Dr. Rennie still writes to me about Wittensson but conditions are still bad. A 50 year old man who commenced work in the mill in 1904 and ceased in 1959 died of Cor Pulmonale due to pulmonary asbestosis in 1962". Also you probably saw McNulty's article in the N.M.J. of 15th December 1962 concerning the patient with the malignant pleural mesothelioma following asbestosis. It does seem that there is still room for the able and energetic Rennie to do some life-saving work in this matter.

I am devising all sorts of techniques to do the technical side of my work with one hand - the left hand is I am afraid permanently useless - but find it all rather fatiguing and very time-consuming. I do not think I can possibly manage to get over to the Council Meeting in Perth. The cost would be very considerable, as I would have to travel with a chaperon which of course doubles all expenses - and I do assure you that not receiving any income at all for 7 months is a very heavy sling to the unchequer.

With best regards,

21st February, 1963.

Dr. J. McNulty,
District Hospital,
KALGOORLIE ... W.A.

Dear Dr. McNulty,--

156
Thank you for your letter of 6th February. I am indeed starting professional work again but I am afraid that "fully restored" is not really an accurate description of my current physical state because I have recovered no power at all in the left upper extremity and with a stick the left leg will only enable me to shuffle some 20 or 30 yards. However it would be too dull not to try to do any work at all and as I have now been out of hospital for 6 weeks I thought I would try and see how I fared.

Thank you for the article which I have read with interest. I have written directly to Dr. Rennie and I enclose a copy of this letter. We shall obviously have to keep on hammering and at any time that you think I can be of assistance in this matter I shall do my best to co-operate.

With kindest regards,

I am yours very sincerely,

Bruce Hunt.

H. MAYNARD RENNIE

F.R.C.P. (LONG.) F.R.I.A.C.P.

TELEPHONE: GW 7711
(APRIL 4 1963) XL 2840

MACQUARIE CHAMBERS,
193 MACQUARIE STREET,
SYDNEY

11th February, 1963.

Dr. J. McElty,
District Hospital,
KILCOONIE, N.S.W.

Dear Dr. McElty,

Thank you very much for your letter of the 6th
February, 1963, with enclosures.

I am very interested and most concerned to know
that in spite of a number of changes in both the mine and
mill at Witteroon the Mines Department inspector reports
that the mill is better than ever.

Would it be possible for you to ask Dr. Letham to
write to me expressing his current opinion on the position
of the mine and mill, so that I may be fully informed for
my approach to the Company?

I can assure you that I will do my best to get some
effective action in this matter.

With kind regards,

Yours sincerely,

H. Maynard Rennie

H. MAYNARD RENNIE

154

DISTRICT HOSPITAL

KALGOORLIE.

JMcN:RM

Date..... 6th February, 1963.

Dr. B. Hunt,
37 Ord Street,
WEST PERTH : W.A.

Dear Dr. Hunt,

I was very pleased to see that you had returned to practice and hope that your health is fully restored.

Dr. Rennie still writes to me about Wittenoom but conditions are still bad. A 50 year old man who commenced work in the mill in 1954 and ceased in 1959 died of Cor Pulmonale due to pulmonary asbestosis in 1962.

Enclosed is a reprint which might interest you.

With kind regards, Sir,

Yours sincerely,


J. McNulty

CHEST PHYSICIAN

H. MAYNARD RENNIE

F.R.C.P. (LOND.) F.R.A.C.P.

TELEPHONE: BW 7711
(AFTER 4 P.M.) XL 2540

MACQUARIE CHAMBERS,

183 MACQUARIE STREET,

SYDNEY

18th January, 1963.

Dr. J. McNulty,
District Hospital,
Maitland, N.S.W.

Dear Dr. McNulty,

Thank you very much for your letter of the 10th December concerning Australian Flu infection.

I am extremely interested in the information you have given concerning the possible improvement in the ventilation of the mine and mill and the extraordinary series of events which have led to the situation "which may radically alter conditions". You mention that in July last dust counts were as bad as ever. I will be most interested to learn whether such counts are indicative of any improvement following the altered conditions. Will you be good enough to let me know about this when such information is available.

I have noted the other particulars given in your letter and I shall certainly do what I can to help for I too am concerned about this problem.

Yours sincerely,

Yours sincerely,

H. Maynard Rennie
H. MAYNARD RENNIE

KALGOORLIE.

6th February, 1963.

JMcN:RM

Dr. H.M. Rennie,
Macquarie Chambers,
183 Macquarie Street,
SYDNEY. : N.S.W.

Dear Dr. Rennie,

Thank you for your continuing interest in our asbestos problem.

Unfortunately the latest inspection of the mine and mill at Australian Blue Asbestos suggests that I may have been too sanguine in my last letter. The Mines Department Inspector reported to me that the mill was dirtier than ever. Despite a reduced ore production from the mine, a higher rate of fibre extraction has been achieved at the expense of higher dust concentrations. Is it to be wondered that this cynical attitude towards their workers' health makes me doubt the Company's good faith.

Enclosed is a reprint which might interest you. Also enclosed are copies of letters concerning a man born 1910 who was unfortunate enough to be employed in the mill by Australian Blue Asbestos from 1954 to 1959. Such rapidly progressive disease is uncommon in the literature of industrial chest disease and confirms the fearful hazard to which the workers are exposed.

Yours faithfully,

J. McNulty

CHEST PHYSICIAN



FIGURE II.



FIGURE III.



FIGURE IV.

lung, but none of the classical showers of fine metallic crepitations associated with asbestosis. An X-ray film of the chest showed extensive pleural thickening throughout the left hemithorax and a left lateral view showed a well-defined shadow projecting inwards from the anterior chest wall. The heart was displaced slightly towards the right. The right lung was normal. The haemoglobin value was 12.3 grammes per 100 ml., the red and white cells were normal and the erythrocyte sedimentation rate was 125 mm. in one hour. The sputum contained asbestos bodies. An attempted aspiration of fluid from the left side of the chest was unsuccessful and a pleural biopsy, performed by Mr. F. J. Clark, produced a thickened, white, rubbery specimen, which was reported to be a malignant pleural mesothelioma.

Treatment with thiotepa was commenced and continued until the patient died in June, 1961.

Autopsy Findings

The only relevant autopsy findings were in the left hemithorax and there was no obvious primary or secondary tumour in the right lung or the abdomen. The left lung was grossly compressed and completely enveloped in the thickened, rubbery, adherent pleura.

The pathologist (Dr. J. Stirrat) reported as follows.

The specimen consists of two wedges of material 11 x 4 x 3 and 7 x 6 x 4 cms. The larger portion of tissue consists of a portion of spongy grey-brown lung tissue covered by the thick firm pleura, measuring 2.5 cms. in thickness (Figure I). The smaller portion of tissue is spongy grey-brown lung with a smooth pleural surface in which there is one small grey-black nodule. Microscopic: Sections show a poorly differentiated malignant tumour infiltrating the pleura and adjacent lung tissue. This tumour consists of pleomorphic cells which tend to line spaces and form small knots and pseudotubular structures; in some instances the space lining cells are flattened or low cuboidal in type, mitoses are present, but are not numerous. There is a marked fibrous tissue stromal increase in the pleura (Figure II).

In addition to the tumour, there is a nodular hyaline fibrosis in the lung showing the whorling around light brown crystalline deposits, characteristic of silicosis (Figure III) together with a more diffuse interstitial fibrosis of the lung with asbestos bodies in considerable numbers distributed in this fibrous stroma (Figure IV). Lastly there is an acute bronchopneumonia present.

The malignant lesion is a pleural mesothelioma as previously diagnosed by pleural biopsy. This is superimposed on a lung showing the combined picture of silicosis, asbestosis and a terminal bronchopneumonia.

Diagnosis: Pleura — pleural mesothelioma; Lung — asbestosis and silicosis — bronchopneumonia.

Discussion

There appears to be a relationship between exposure to blue asbestos and the development of the pleural mesothelioma in this case. Pleural mesotheliomas are very rare tumours and details are known of only three cases in Western Australia. Asbestosis has, regrettably, become less rare, but there are less than 40 known cases in the State. The relatively short period of exposure to blue asbestos dust confirms an impression received from Wagner *et alii* (1960, 1961) that these tumours may arise after transitory exposure to crocidolite in susceptible persons.

Experience in Western Australia certainly confirms that blue asbestos is a very harmful and lethal fibre. The dust is one that urgently requires further experimental study (Barnes, 1961). The interval between exposure and the development of the tumour is much shorter than has been previously reported. This also applies to the interval between exposure to blue asbestos and the development of asbestosis in this State, which in one instance was less than four years.

The surface gold mining in which the patient was engaged may have contributed to the silicosis which was present, but silicosis is rarely found in Western Australian gold miners with only 10 years' surface mining experience.

Summary

A case is reported of malignant pleural mesothelioma in an asbestos worker suffering from asbestosis and silicosis after two years' work in a blue asbestos mill 10 years previously.

Acknowledgements

My thanks are due to Dr. S. Webster, for referring the patient; to Dr. W. Harris and Dr. D. D. Letham, for helpful advice; and to the Public Health Commissioner, Dr. L. Henzell, for permission to publish this case.

References

- BARNES, J. M. (1961). "Mode of Action of Some Toxic Substances". *Brit. med. J.*, 2: 1879.
- HEARD, B., and WILLIAMS, R. (1961). "The Pathology of Asbestosis with Reference to Lung Function". *Thorax*, 16: 264.
- WAGNER, J. C., SLEGGY, C. A., and MARCHAND, P. (1960). "Diffuse Pleural Mesothelioma and Asbestos Exposure in the North Western Cape Province". *Brit. J. Indust. Med.*, 17: 260.
- WAGNER, J. C., SLEGGY, C. A., and MARCHAND, P. (1961). "Diffuse Pleural Mesothelioma in South Africa". *S. Afr. med. J.*, 35: 28.

MALIGNANT PLEURAL MESOTHELIOMA IN AN ASBESTOS WORKER

J. C. McNULTY, M.B., B.Ch., B.A.O.

Chest Physician, Kalgoorlie District Hospital, Kalgoorlie,
Western Australia

BLUE ASBESTOS has been mined in Western Australia since about 1946, and with increased production over the last 10 years, dust control and suppression have been serious problems. The asbestos vein lies in a rock body which is mainly quartzite. A number of men have developed asbestosis, silicosis, and a mixed type of pneumoconiosis containing elements of both.

The blue asbestos fibre is crocidolite, and Wagner *et alii* (1960, 1961) suggested the probable relationship between exposure to this fibrous mineral and the occurrence of diffuse pleural mesothelioma. The pathological evidence for the association of these tumours with asbestos exposure was not conclusive; in only eight of 33 cases was evidence of asbestosis present. However, with one exception, there was circumstantial evidence of at least transitory asbestos exposure. In their series the mesothelioma occurred 20 to 40 years after the exposure to dust. Most authors stress the long interval between exposure to asbestos dust and the development of asbestosis, and theories of the pathogenesis of the disease have been based on this long interval and its effect on the asbestos body (Heard and Williams, 1961).

The following is believed to be the first case of pleural mesothelioma reported in an asbestos worker outside South Africa.

Clinical Record

A white male worker, born in 1913, now employed as a labourer, had been a surface gold miner from 1937 to 1946 and a mill worker in an asbestos mine from 1946 to 1950. He had also been an occasional prospector for gold. On December 13, 1959, he was referred to the chest clinic for radiological examination of the chest. The X-ray film showed what appeared to be a small left-sided pleural effusion, but the patient refused to attend the hospital for a report or a clinical examination, and returned to the "bush".



FIGURE 1

On October 25, 1960, he was referred again to the chest clinic for examination. He had had some loss of weight, malaise, cough, moderate dyspnoea on exertion and heavy night sweats. He looked ill and wasted, and had early finger clubbing, diminished air entry to the lungs and a dull percussion note over the left side of the chest. There were a few crepitations at the base of the left

Continued..

The plans and improvement mentioned earlier make me hopeful that steady improvement will be maintained. The coincidental diagnosis of disease in so many men in 1958-59 highlighted the problem and had a dramatic effect. The problem is still acute and much more work will be needed before the hazard to the men will be reduced to at least that of gold-mining.

I am still a little concerned about the carcinogenic effect of crocidolite and wish that the Company wouldn't use its tailings for roads and paths. Tailings were used as fillers at the golf course so that the poor devils inhale asbestos at recreation as well.

Many thanks for your interest. Anything that you can do to impress upon Australian Blue Asbestos the seriousness of the problem would be appreciated.

Yours faithfully,

J. McNulty
CHEST PHYSICIAN

Copy forwarded 10/12/62 to:

Dr. D.D. Letham,
Physician Occupational Health,
Department of Public Health,
57 Murray Street,
PERTH : W.A.

KALGOORLIE.

10th December, 1962.

JMcN:RM

Dr. H.M. Rennie,
F.R.C.P.(Lond.) F.R.A.C.P.,
Macquarie Chambers,
183 Macquarie Street,
SYDNEY : N.S.W.

Dear Dr. Rennie,

149
Thank you for your letter regarding dust conditions at Australian Blue Asbestos.

Unfortunately the situation has altered little, the dust has not been laid and, to date, it is doubtful if any major lessening of the hazard has taken place. In July of this year dust counts at the mine and mill were as bad as ever. The Konimeter is still being used for dust counting and although it is not the ideal instrument, there is little point in pressing for a finer instrument until the coarse dust has been suppressed.

However, since July several events have occurred which may radically alter conditions. Through ventilation underground is possible now that shafts have broken through to the surface in several places. A recent earth movement altered the geography of the mine and this is expected to considerably improve ventilation. A new type of dust extractor embodying a synthetic fibre sock has had successful experiments and is being installed in the mill. This is a pretty expensive dust extraction process and there are great hopes that it will help to solve the problem. My information in regard to this is derived from discussions with Dr. Letham, Mines Department Inspectors and Mr. Thomas, Superintendent of the company.

Fairly short exposure is still causing silicosis and asbestosis and the tragedy is aggravated by their relative youth. There are now about 42 men fairly seriously affected, or dead, and in most instances their only exposure to harmful dust was at Wittenoc. The industry has been producing for about 15 years and only the huge labour turnover prevented disease on an epidemic scale. 80 p.c. of the workers, at any one time, have been employed for less than three years. Many of them have scattered elsewhere in the mining industry and now complicate the overall picture.

cont....

H. MAYNARD RETNIE
F.R.C.P. (LOND.) F.R.A.C.P.

TELEPHONE: BW 7711
(DAYS & NIGHTS) XL 2340

MACQUARIE CHAMBERS,
183 MACQUARIE STREET,
SYDNEY

26th November, 1962.

Dr. J. McNulty,
Chest Physician,
District Hospital,
KALGOORLIE W.A.

Dear Dr. McNulty,

A little over a year ago we had some correspondence concerning the health of workers employed by Australian Blue Asbestos.

I understand that the Company has made some further alterations to allow for the dust problem and I am anxious to know whether you have any further views on the matter.

Would you be good enough to bring me up to date?

Yours sincerely,



H. MAYNARD RETNIE

19
ABD

MEETING 8TH JANUARY, 1962, IN MR. BRISBANE'S
OFFICE, MINES DEPARTMENT, PERTH.

Present: Mr. Brisbane, State Mining
Engineer.
Mr. Boylan, Chief Mines Inspector.
Dr. McNulty, Chest Physician,
Kalgoorlie Chest Clinic.
Mr. Thomas, Manager, Australian Blue
Asbestos.
Dr. Letham, Physician, Occupational
Health.

Dust counts were reviewed. Those in the mine showed considerable improvement and Mr. Boylan expressed general satisfaction with the improvement of conditions in the mine. High counts still prevailed in the mill; a recent visit had been made by a representative of Gregorys and Co., Sydney. It is the intention of this Company to seek further information on a form of stocking filtration which has been developed in America. This, apparently, is of exceedingly fine mesh and will trap the fine particles which are a problem in the mill at present. Mr. Thomas said that Australian Blue Asbestos is prepared, if necessary, to pull out the existing exhaust system in the mill and entirely replace it, virtually regardless of cost. He stated also that there are five employees from Hart & Co., Perth, at present continuously employed on the duct work in the mill in an all-out effort to improve conditions in the existing plant.

A further meeting will be held about July or August by which time it is hoped that the ventilation in the mill will be satisfactory.

D.D. Letham

(D.D. Letham)
PHYSICIAN
OCCUPATIONAL HEALTH.

DDL/CT
25th January, 1962.

H. MAYNARD RENNIE
F.R.C.P. (LOND.), F.R.A.C.P.

TELEPHONE: BW 7711
(A.C. & P.M.) XL 2540

17
MACQUARIE CHAMBERS,
163 MACQUARIE STREET,
SYDNEY

10th November, 1961.

Dr. Bruce Hunt,
37 Ord Street,
WEST PERTH.

Dear Bruce,

Many thanks for your note of 6th November.

Dr. K.L. Sutherland is a Doctor of Science as you surmise and he was already on the point of departure from Perth when I received your letter. He is due in Sydney on Monday next and I will get in touch and see what goes on.

I will let you know if there are any immediate developments.

Warmest regards,

Yours sincerely,

H.M.R.
H. MAYNARD RENNIE

17
6th November 1961

Dr. H. Maynard Rennie,
Macquarie Chambers,
183 Macquarie Street,
SYDNEY. N.S.W.

Dear Ted,

127 A very brief note as I am just back in Perth after three weeks' holiday. Thank you for your letter of 30th October enclosing your reply to Don Latham. I also have copies from McNulty of your letter to him of 29th September and his letter to you of 25th October. I am very glad indeed that steps are being taken in this very serious matter.

140 My secretary this morning showed me a note from last Saturday's paper (4th November) which reads: "Dr. K.L. Sutherland, director of research of the Colonial Sugar Refining Co., of Sydney, is visiting this State and will study the blue asbestos industry on a visit to Wittenoom Gorge mine." My presumption would be that Dr. Sutherland is a Doctor of Science rather than of Medicine but I would be glad of information on this point and also a note as to whether you would like me to do anything for the gentleman while he is here. 144

With best regards,

H. MAYNARD RENNIE
F.R.C.P. (LOND.), F.R.A.C.P.

TELEPHONE: BW 7711
14-4 P.M.: XL 2540

MACQUARIE CHAMBERS,
183 MACQUARIE STREET,
SYDNEY

19

Dear Mr. Stultz,

Thank you for your 14th
further interesting letter of 25. Oct.
I shall file same for reference.

14th - I am enclosing copy of letter
sent to Mr. Stultz.

With regards

Yours sincerely

1/11/67

H. Maynard Rennie

H. MAYNARD RENNIE
F.R.C.P. (LOND.), F.R.A.C.P.

TELEPHONE: BW 7711
(APTS. 4 & 5) XL 2540

MACQUARIE CHAMBERS,
183 MACQUARIE STREET,
SYDNEY

30th October, 1961.

Dr. Bruce Hunt,
37 Ord Street,
WEST PERTH. W.A.

My Dear Bruce,

Just to enclose a copy of a letter I
have written to Letham on the current topic.
I hope you feel that we are making at least a
little progress in the matter.

Terribly sorry to miss you in Adelaide
but look forward to seeing you early next year.

All the best.

Yours as ever,

*Daily News
Sat Nov 11*



14
30th October, 1961.

Dr. D.D. Letham,
Department of Public Health
Box 134. G.P.O.
PERTH. W.A.

Dear Dr. Letham,

127
Thank you for your letter of the 2nd October 1961 concerning the employee. I have perused his history with great interest and also looked at the slides which I return herewith as you requested. Thank you for letting me see them.

I have been in touch with the Company again a few days ago and I am informed that a conference was held with the Mines Department in Perth, a Mr. Thomas of Australian Blue Asbestos a mining engineer and an ex manager at Wittenoom were present. The Company has now made arrangements to take regular dust samples and make counts on the konimeter and this will be done regularly in order to give a series of readings under varying conditions. Samples of dust have also been sent to ventilatory engineers in United States of America seeking their comments on dust counting particularly in relation to asbestos.

The Company will also be very pleased indeed to receive from medical sources advice on what is regarded as "safe dust count levels". It will then be possible to compare such recommendations with actual findings over a period of a few months. It will then be possible to determine whether further action is necessary. In the meantime I am continuing my enquiries along the lines of securing this information and I shall be most happy to receive from you any comments or advice that you may have at present or are able to procure.

This seems to be to be the sort of action that is desired in the circumstances and I hope that you agree. If not, I will be most interested to hear your further suggestions.

I am sending a copy of this letter to Dr. Bruce Hunt and Dr. McNulty.

Kind regards,

Yours sincerely,

H. MAYNARD BERNIE

DISTRICT HOSPITAL

KALGOORLIE.

JMcN:FG.

Date... 25th October, 1961.

Dr. B. Hunt,
57 Ord Street,
WEST PERTH.

Dear Dr. Hunt,

Attached is a copy of another letter to Dr. Maynard Rennie summing up the present situation.

Kind regards,

Yours faithfully,



J. McNulty
CHEST PHYSICIAN.

11	started	mining	in	1950
4	"	"	"	1951
4	"	"	"	1952
5	"	"	"	1953
5	"	"	"	1954
3	"	"	"	1955
1	"	"	"	1957

6 are aged less than 35 years.
 11 men are aged less than 40
 23 are less than 50 years of age.
 14 were U/ground miners.
 20 " Surface workers.

I t might be argued that these are a product of the bad old days, but I would counter that by saying that these men represent the grossest of exposure to dust and that the real health hazard will not be realized for another 10 years, particularly the cancers.

These men are also the majority of workers who remained at Wittenoom for more than 5 years. A survey last year showed that over 70% of workers had been less than 2½ years in the employment of the company.

The Company may resent my interference, but only moral pressure is being exerted and it is my wish that the situation be improved and controlled without adverse publicity.

Yours faithfully,

J. McNulty
CHEST PHYSICIAN.

14°

DISTRICT HOSPITAL

KALGOORLIE.

JMoN:FG.

Date 25th October, 1961.

Dr. H. Maynard Rennie,
F.R.C.P. (Lond.) F.R.A.C.P.,
Macquarie Chambers,
183 Macquarie Street,
SYDNEY, N.S.W.

Dear Dr. Rennie,

Many thanks for your letter and for your interest in the health of workers employed by Australian Blue Asbestos. At a meeting in Perth recently, between representatives of the Company, and Mines and Public Health Department, we discussed the situation and it is to be hoped, that there is now a better appreciation of the seriousness of the consequences of dust in the mine and mill.

I was able to supply details of 34 men, seriously affected by a mixture of asbestosis and silicosis, whose disease could reasonably be attributed to Wittenoom. One of them is dead already and at least 3 are dying. There are also 22 men in whom there are reasonable grounds for suspecting that they are developing disease.

The man who died was aged 48 and worked about 2 years in the mill. Post mortem showed gross asbestosis and silicosis and a malignant cancer of the pleura directly attributable to his work in Wittenoom. I am seriously concerned that these cancers of the pleura which are being reported in large numbers from South Africa, are due to an individual susceptibility and minimal exposure to blue asbestos (Crocidolite). Crocidolite appears to cause lung cancers.

13 had less than 5 years mining.

3 " " " 6 " "

5 " " " 7 " "

2 " " " 8 " "

11 " about 10 or more years mining.

MEETING A.M. 10TH OCTOBER, 1961. IN MR.
BRISBANE'S OFFICE, MINES DEPT. PERTH

Present: Mr. Brisbane (State Mining
Engineer)
Mr. Boyland (Chief Mines
Inspector)
Dr. McNulty (of this Dept.)
Dr. Letham (Physician, Occupational
Health).

The purpose of the meeting was to discuss the means of attaining liaison between the two Departments, in matters concerning occupational health of miners. After considerable discussion it became clear that:-

The State Mining Engineer was quite prepared to accept the proposition that this Department should appoint a medical officer who would be occupied, full-time if necessary, in matters concerning the occupational health of miners and the conditions under which they work.

There seems to be no doubt that much benefit could be gained by bringing together specialised knowledge in the engineering field, observations of trained observers i.e. mines inspectors, and the specialised knowledge of an occupational health physician, for the purpose of minimising and preventing occupational hazards.

D. D. Letham

(D.D. Letham)
PHYSICIAN
OCCUPATIONAL HEALTH.

Present: Mr. Brisbane (State Mining Engineer)
Mr. Boyland (Chief Mines Inspector)
Dr. McNulty (of this Dept.)
Mr. Thomas (Manager, Aust. Blue Asbestos)
Dr. Latham (Physician, Occup. Health)

At the suggestion of Dr. McNulty this meeting was called, mainly with the object of acquainting the Mines Department and the Management of Australian Blue Asbestos with the most recent information on the incidence of asbestosis and silicosis resulting from work at Wittenoom. 17 individual cases were cited; in these it was considered that a diagnosis of either asbestosis or silicosis, or both, had been made. Grave concern was expressed by Dr. McNulty and myself, not only at the number of cases but also at the possibility of gross incapacity which had resulted in some of them. It was also pointed out that a disturbing feature was that a number of these men had experienced symptoms some years after their last exposure to asbestos or silica at Wittenoom without their having been any further exposure from another source. It might be inferred from this that further cases will present in this way.

All present shared this concern. Mr. Thomas indicated that as far as the mill was concerned the Company was prepared, if necessary, to replace the present exhaust ventilation with one which would be more effective. The Company had, in fact, called in a consultant from Gregory & Company, Sydney, for this very purpose.

As far as the mine is concerned, Mr. Thomas considered that, including plans for the provision of a second fan, the present ventilation system should be adequate. He indicated that specific remedial measures could then be taken when a high dust count was known to have been taken from a particular area.

Considerable discussion on dust counts took place. It was recognised that the Kanimeter had definite limitations, particularly as far as assessment of asbestos dust was concerned. On the other hand it was an instrument with which mines inspectors were quite familiar; and the view was put and accepted in principle that the reduction of the overall dust concentration could be a reasonable measure of reduction of silica and asbestos dust.

It was agreed that the Mines Department would make available to Australian Blue Asbestos an officer who would instruct an employee of Australian Blue Asbestos in the use of the Kanimeter. This employee would be employed full-time in taking dust counts, the results of which would then be quickly available to the management who could investigate the reasons for high counts in particular areas. This was seen to be a matter of prime importance as recent dust counts would indicate that there are many areas in the mine in which counts are excessively high.

My purpose in suggesting this meeting was to show the price of asbestos mining in terms of health.

137

I have details of 34 men seriously affected by a mixture of asbestosis and silicosis. ~~X~~ One of them is dead already and at least 3 are dying. There are also 22 men in whom there are reasonable grounds for suspecting that they are developing disease.

13 had less than 5 years minings.

3 " " " 6 " "

5 " " " 7 " "

2 " " " 8 " "

11 " about 10 or more years mining.

The man who died was aged 48 and worked about 2 years in the mill. Post mortem showed gross asbestosis and silicosis and a malignant cancer of the pleura directly attributable to his work in Wittenoom. I am seriously concerned that these cancers of the pleura which are being reported in large numbers from South Africa are due to an individual susceptibility and minimal exposure to blue asbestos (Crocidolite). Crysolite appears to cause lung cancer

11 of these started mining in 1950.

4 " " " " " 1951.

4 " " " " " 1952.

5 " " " " " 1953.

5 " " " " " 1954.

3 " " " " " 1955.

1 " " " " " 1957.

6 are aged less than 35 years.

11 men are aged less than 40.

23 are less than 50 yrs of age.

14 were u/g miners

20 " Surface workers.

It might be argued that these are a product of the bad old but I would counter that by saying that these men represent the grossest of exposure to dust and that the real health hazard will not be realized for another 10 years, particularly the cancers.

These men are also the majority of workers who remained at Wittenoom for more than 5 years. A survey last year showed that over 70% of workers had been less than 2½ yrs in the employment of the company. ~~X~~

The conditions in which the men work may be better now but the most recent dust counts compiled by the Mines Department do not suggest that dust control and suppression have improved much at all.

I am not really competent to discuss dust counts but would suggest that we study the Inspector's report and compare it with counts taken in previous years.

Underground:

Average dust count for day shift.	June, '60	230 P.P.C.C.
" " " " " "	Nov, '60	180 P.P.C.C.
" " " " " "	Aug. '61	420 P.P.C.C.

DISTRICT HOSPITAL

KALGOORLIE.

JMcN.AW.

Date 9th October, 1961.

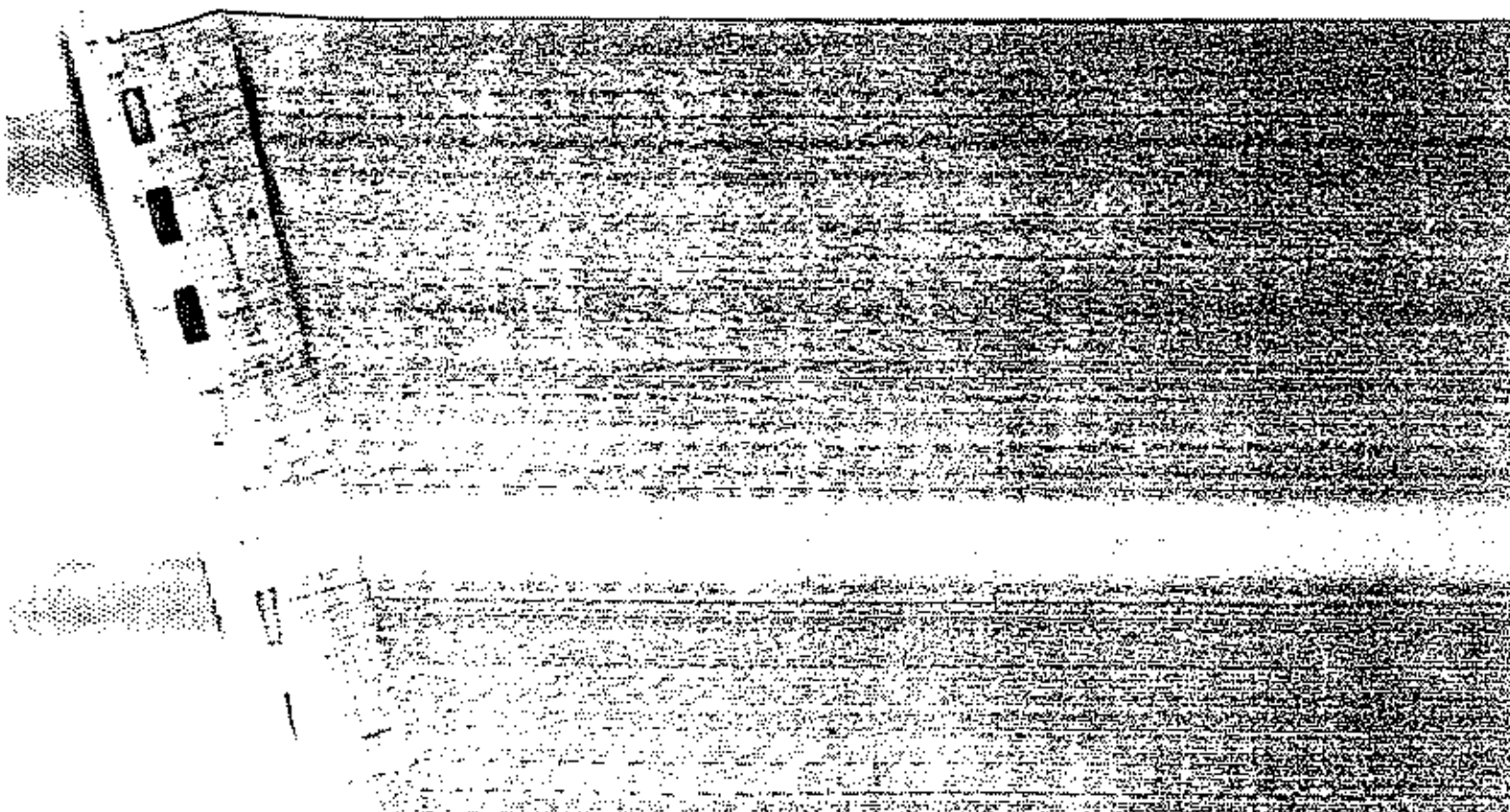
Dr. Bruce Hunt,
37 Ord Street,
WEST PERTH.

Dear Dr. Hunt,

To keep you in the picture, enclosed is a copy of a rather more encouraging letter from Dr. Rennie.

We are having an official meeting with representatives of the Management of the Australian Blue Asbestos on Tuesday, 10th October in the Mines Department.

Kind regards,



Asbestos Mine Was Too Dusty

[illegible]

5th October, 1961.

Mr. O.A. Allen,
Australian Blue Asbestos Pty. Ltd.,
WITTENOOM. W.A.

Dear Mr. Allen,

Proposed Meeting at Mines Department
Tuesday Afternoon, 10th October, 1961
at 2.15 p.m.

1. This Department is becoming increasingly concerned at the number of employees and ex-employees of Wittenoom who are presenting as patients suffering from asbestosis and/or silicosis. I have been able to trace 26 such cases in which the diagnosis is either certain or probable. A disturbing feature is that some of these patients may first experience symptoms years after their last exposure to asbestos.
2. Dr. McNulty informs me that he considers a number of the dust counts at Wittenoom to be too high. The implication may well be that, notwithstanding considerable expenditure on ventilation, the latter is not yet adequate.
3. Dr. McNulty and Mr. Boyland will be coming down from Kalgoorlie for a meeting in the morning of Tuesday, 10th October. The original intention was to seek representation from your Company from Perth at a special meeting in the afternoon, specifically to discuss Wittenoom. However, it is found that Mr. Thomas will have left for overseas at that time; having checked with your Company's Secretary in Perth, it is appropriate that I should ask you to make the journey from Wittenoom. I apologise for the short notice but I hope that you can appreciate the reason. I have done my best to prolong the notice by sending a telegram today.

If you are unable to come it might be possible to send a delegate. In any event it would be appreciated if you would let me know your intentions.

Yours sincerely,

PHYSICIAN,
COMMONWEALTH DEPARTMENT

135

DISTRICT HOSPITAL

KALGOORLIE.

JHCH.AW.

Date

4th October, 1961.

Dr. Bruce Hunt,
37 Ord Street,
WEST PERTH.

Dear Dr. Hunt,

125

Many thanks for your letter. I fear that we may become foundation members of a mutual admiration club. I have been privileged to read your letter to the State Government Insurance Office concerning and when asked to comment merely said that I agreed with every word of it.

I have proposed a conference between Australian Blue Asbestos Officers and representatives of the Mines and Public Health Departments and am awaiting developments.

May our joint pressure at all points produce results.

Yours sincerely,



H. MAYNARD RENNIE

F.R.C.P. (LOND.) F.R.A.C.P.

TELEPHONE: GW 2711

TYPE 4 F.M. XL 2940

MACQUARIE CHAMBERS,

183 MACQUARIE STREET,

SYDNEY

4th October, 1961.

Dr. Bruce Hunt,
37 Ori Street,
WEST PERTH. W.A.

My dear Bruce,

Many thanks indeed for your lengthy and helpful letter concerning the Wittenoom problem. Prior to receiving it I had taken up the matter again with the Company on the letters from McNulty and Letham which you have seen.

The Company is quite willing to listen to recommendations from the medical people involved and the appropriate point here seems to be the determination of "safe" dust levels. I think that Letham's suggestion that the Company take an active interest in measuring dust levels is a good one and I am putting this up to the Company.

I have no doubt that the Company will take suitable action as soon as we can provide this evidence. I am working on this now with Dr. Gordon Smith of the School of Public Health, of the University of Sydney. If the evidence put forward by both Letham and McNulty fails to achieve the desired result I shall certainly come over and see it for myself.

If I had not already taken action your helpful letter would have been more than effective in bringing about this result.

I shall certainly keep you posted regarding developments.

Kind regards,

Yours sincerely,

Handwritten signature

H. MAYNARD RENNIE.

*Very I shall write him, soon
H. M. Rennie*

GOVERNMENT OF WESTERN AUSTRALIA

DEPARTMENT OF PUBLIC HEALTH
57 MURRAY STREET
PERTH

In replying please quote

DDI/CT

LETTERS: BOX 134,

G.P.O., PERTH

TELEPHONE: 23 1631

All communications to be

addressed to the

"COMMISSIONER OF

"PUBLIC HEALTH"

2nd October, 1961.

Dr. Bruce Hunt,
37 Ord Street,
WEST PERTH. W.A.

Dear Dr. Hunt,

Here is a copy of a letter to Dr. Rennie.
Following a telephone conversation with him in Sydney,
I mentioned that I would send him information about
this patient whose case history I presented, with the
relevant slides, at the recent meeting in Sydney.

Yours sincerely,



(D.D. Letham)
PHYSICIAN,
OCCUPATIONAL HEALTH.

* *Occupational Health Committee*
14/10/61

Encl.

isolations have been made from patients considered as possibly having disease due to these organisms and of these a smaller number showed a probability of such an infection. Drug sensitivity tests showed resistance to all three, or two, standard anti-tuberculous drugs in the large majority. Nearly all patients from whom anonymous mycobacteria were isolated had chronic pulmonary disease, e.g., tuberculosis (active or inactive), silicosis, silico-tuberculosis, pulmonary fibrosis, bronchitis and emphysema, carcinoma, asbestosis. The organisms have not so far been identified in sputum from patients with normal lungs.

Tests with P.P.D.-B.

In 1960, 500 mental hospital patients were simultaneously skin tested with P.P.D.-S. and P.P.D.-B. (obtained from America), using five tuberculin units or its equivalent, given intradermally. 50 per cent. reacted to P.P.D.-B., and 9 per cent. gave a larger reaction to P.P.D.-B. than to P.P.D.-S. One should be cautious in interpreting these results, at least until further group community tests are carried out, including testing of school children with Battey-type P.P.D. derived from the local endemic strain of Group III organisms.

PNEUMOCONIOSIS IN RELATION TO PULMONARY TUBERCULOSIS

Tuberculosis remains a problem in the mining areas. A third mass survey of the Kalgoorlie-Boulder Goldfields district during the year produced a crop of new notifications representing an incidence of 2.1 per 1,000 persons X-rayed.

Tables 7 and 8 show the state of affairs, in that yearly notifications amongst miners, ex-miners, and the non-mining population in the goldfields have shown no falling off in the last few years, despite active control measures, such as repeated surveys, close supervision of tuberculosis cases and careful follow-up of mine workers, whether showing evidence of silicosis or not. This disappointing result must be due to other factors, such as the predisposition of silicotics to tuberculosis and the ineffectiveness of dust control measures, as suggested by the large numbers of silicosis cases still arising in the industry.

FUTURE PLANS

- (1) Continuation of mass compulsory X-ray surveys in Metropolitan and country areas, with more frequent surveys in districts where larger numbers of cases have appeared.
- (2) Special consideration to the mining problem, including possibly prophylactic chemotherapy in miners and ex-miners who show a positive tuberculin reaction.
- (3) Continuation of school tuberculin surveys and prophylactic isoniazid therapy for strongly positive reactors.
- (4) Completion of the installation of miniature X-ray units in the larger hospitals for routine filming of in and out patients.
- (5) Tightening up of the system of routine bacteriological testing of all patients attending clinics with any evidence of significant tuberculosis lesions, including those with calcified foci.
- (6) Careful follow-up of contacts of known cases, especially aimed at those living in remote country areas.
- (7) Skin testing of patients bacteriologically positive for Group III (unclassified) mycobacteria, their contacts and other community groups with P.P.D. derived from the endemic strain, and with other "tuberculina" as thought necessary.

F. G. B. EDWARDS, B.A., LL.B., M.B., B.S.,

Director, Tuberculosis Control Branch.

EXTRACT OF CPH
ANNUAL REPORT

1960.

2nd October, 1961

Dr. H. Maynard Rennie,
Macquarie Chambers,
183 Macquarie Street,
SYDNEY. N.S.W.

Dear Dr. Rennie,

Employee Australian
Blue Asbestos, Wittenoom.

Here is a copy of the history of this patient, together with relevant chest x-ray slides and three slides of biopsy from the lung.

He was born 19th October, 1921, in Poland. He left school in 1935, and until he came to Australia in 1950 he was a farm worker. In that year he commenced work with Australian Blue Asbestos at Wittenoom, building a new powerhouse about half a mile from the mill. At this time he was not aware of much dust. In the years 1953-55 he worked for 2½ years in the mill, which, he said, was very dusty. By the time he left the mill in September, 1955, he had become a leading hand, watching machinery etc. After leaving Wittenoom he became a yardman in a hotel.

He felt well until February, 1961, when he noticed that he became easily tired and short of breath. This dyspnoea has been associated with chopping wood, walking upstairs and walking fast along the flat. He does not consider that it has become worse since the onset. There has been no wheeze. Since the onset he has been aware of a cough, associated with yellow sputum which disappeared after about two or three months. It was most noticeable in the early morning when he would cough up approximately half a teaspoonful of sputum; the sputum has never been blood-stained. He has lost 1½ stone in weight since the onset. He smokes four or five cigarettes during the day and drinks one or two glasses of beer a day. There is no history of any previous illness. His wife is well and he has five children, 3 to 13 years, all well. His mother and father are both well.

Cont'd.....2.

KALGOORLIE.

JMcN:EG.

2nd October, 1961.

Mr. H. A. Telfer,
Under Secretary,
Mines Department,
PERTH.

Dear Sir,

I feel that it is imperative that a meeting be held between the Management of Australian Blue Asbestos and representatives of the Mines and Public Health Departments. This could perhaps be arranged, if you are agreeable, for Tuesday, 10th October, when both Mr. Boyland and I will be in your Department. We have both visited Wittenoom and the most recent dust counts show that a serious health hazard exists.

Dr. Bruce Hunt has written me concerning a man dying in Perth Chest Hospital from a disease contracted at Wittenoom. I know the patient and confirm Dr. Hunt's diagnosis. I have many other men seriously affected by silicosis and asbestosis. One man has died of a cancer attributable to 2 years work in the Mill. Mr. Collard, General Secretary, Australian Workers' Union has also consulted me and expressed grave concern over working conditions. He stated that he intended to pursue the matter further.

It would appear that repeated advice and warnings about the health hazard from dust have been ineffective and that stronger action will have to be taken.

Yours faithfully,

Copy forward to Dr. Letham.

J. McNulty
CHIEF PHYSICIAN.

121
H. MAYNARD RENNIE
F.R.C.P. (LOND.) F.R.A.C.P.

TELEPHONE: BW 7711
CHRYSLER 4 ROAD XL 2540

MACQUARIE CHAMBERS,
183 MACQUARIE STREET,
SYDNEY

29th September, 1961.

Dr. J. McNulty
Chest Physician
District Hospital
KALGOORLIE W.A.

Dear Dr. McNulty,

116
Thank you for your letter of the 18th of September which I was very pleased to receive.

The additional information that you have given concerning the dust counts are very interesting and certainly do not reflect any improvement during the working period of the new machinery. Your comments concerning this may be the answer.

I am quite satisfied that the Company will take action when we produce the facts for them to study. At the moment I am reading all the articles I can get hold of and have discussed the matter with Dr. Gordon Smith of the School of Public Health at the University of Sydney. He is both interested and helpful.

I shall let you know what progress we make in the near future with kind regards and again many thanks for your helpful letter.

Yours sincerely,



H. MAYNARD RENNIE

126
28th September 1961

Dr. D. Letham,
Department of Public Health,
57 Marry Street,
PERTH W.A.

Dear Don,

Thank you for the copy of your letter to Rennie. Herewith
my own contribution to the gaiety of nations.

With best regards,

125
37 ORD STREET
WEST PERTH

26th September 1961

Dr. J. McNulty,
District Hospital,
RAIGOBURIE. W.A.

Dear Jim, (if I may make so bold),

Two things. The first is that your reply to Rennie is a literary masterpiece. I should have been very proud to have couched such a concentrated and effective criticism in such courteous phraseology. Everybody to whom I have shown the letter is loud in its praise.

123.
I enclose a copy of my own reply. If between us we do not get a satisfactory bite I propose to take it straight along from there, friendship or no friendship.

With congratulations and warm regards,

Bruce Hunt

Dr. H. Maynard Rennie.

25th September 1961

I have myself seen the X-rays of 6 of these cases, and can obtain access to the rest.

I recall that when I was interviewing Mr. Allen he told me that in the twelve years he had been at Wittenoom less than 10 cases of "dusting" had been brought to his notice - I quoted this in my report to you. If one takes this statement, puts it alongside the information with which you have been supplied in Sydney, and then on the other hand casts a glance at the figures supplied by Leithen, one comes up with the feeling either that the responsible officers of the Company have the ostrich instinct very strongly developed, or that the comment in my letter, which you quoted back to me and to which you took considerable exception, is nevertheless amply justified.

My dear Ted, this matter cannot possibly be allowed to rest. I gather from the senior Health Authorities that they have been trying for some considerable time to get the Company to realise and to remedy the situation - so far without much effect. It would obviously be much more satisfactory if the Company itself took the necessary action - which I suggest should start with an inspection by yourself and by a well-qualified ventilation engineer. After examining the evidence which has been produced for you I find it very difficult to believe that a reputable public Company could remain in its apparently self-satisfied state and continue to allow the asbestos mining industry to go on killing men unfortunate enough to be employed in it. If however the present situation is to remain unaltered I would feel it my bounden duty to bring the matter to the personal attention of the Premier. I would much prefer not to have to do this; I don't want to cause worry and possible distress to the very good friend of mine named Rennie, and I prefer not to start a bout of public and clinging. Surely you will come and see for yourself - following which I am quite confident any further action on my part would be unnecessary.

Very sincerely,

125
25th September 1961

Dr. H. Maynard Rennie, F.R.C.P., F.R.A.C.P.,
183 Macquarie Street,
SYDNEY. N.S.W.

My dear Ted,

113
I am both very surprised and very disappointed with your letter of 7th September. You ought to know me well enough to know that I don't start making a fuss until I am very sure of my facts. I have sent a copy of your letter to McNulty and to Letham and have asked them to provide you with such further information as you seek - they have shown me copies of their replies. I have, in the meantime, extended my enquiries to other sources. Russell and Davidson, Commissioner and Assistant Commissioner of Public Health, both speak of Wittenoom in blasphemous terms - "a festering sore" was one of the choicer expressions which came into the conversation. Bob Elphick, the very efficient Medical Superintendent of the Perth Chest Hospital, tells me that he has seen more serious chest disease from Wittenoom during the past five years than he has seen from all the gold mines of Western Australia in the past fifteen years. Purely by chance the State Government Insurance Office asked me three days ago to examine in hospital one a Yugoslav of 42. This man came to Australia in 1951, apparently in good health. He worked on a farm in New South Wales for two years, and thereafter in the timber industry in Western Australia for two years. He was still apparently in good health in 1955 when he was so unfortunate as to take a job at Wittenoom. His chest X-ray in that year (I have seen it) was perfectly clear. In 1958 his chest X-ray showed gross asbestotic changes. He is now dying of asbestosis in very considerable distress in the Chest Hospital - it is doubtful if he will live more than a few weeks. I think if the officers of the C.S.R. whose rather smug and self-satisfied statements to you are quoted in your first paragraph were to be compelled to look at Markovic and to hear him struggling for breath they would be a little less satisfied "that they have gone as far as they can with the present knowledge".

Dr. Letham has looked up the records of those cases of chest disease which have been sent to Perth from Wittenoom during the years 1958-61. He has so far traced 26 cases which he classifies as

Asbestosis	12	
Probable asbestosis	3	
	<u>15</u>	
Silicosis	4	(one of whom has added tuberculosis)
Probable silicosis	6	
	<u>10</u>	
Pneumo-silicosis and asbestosis .	1	
	<u>1</u>	
Total		<u>26</u>

GOVERNMENT OF WESTERN AUSTRALIA

DEPARTMENT OF PUBLIC HEALTH
57 MURRAY STREET
PERTH

In replying please quote

DDL/CT

LETTERS: 504 124

G.P.O. PERTH

TELEPHONE: 211231

All communications to be
addressed to the

"COMMISSIONER OF
PUBLIC HEALTH"

20th September, 1961.

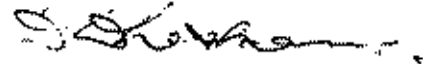
Dr. Bruce Hunt,
37 Ord Street,
WEST PERTH.

Dear Dr. Hunt,

Asbestosis - Wittenoom Caused

Here is a copy of a letter which I have
written to Dr. Rennie on this subject.

Yours sincerely,



(D.D. Letham)
PHYSICIAN
OCCUPATIONAL HEALTH SECTION.

Encl.

mine had been closed down and the new mine was operating.

To me the important question appears not to be how much, however belatedly, has been spent on ventilation, but as to whether or not the ventilation is efficient enough to keep dust down to levels which appear to be safe (making due allowance for the limitations on our knowledge of safe levels). This requires an awareness and desire on the part of management of the need for protecting their employees from asbestosis.

It is essential that the management do not rest content with the fact that they have spent so many thousands of pounds on ventilation but that they should not rest content until they are satisfied that their employees are adequately protected. I am suggesting that the Company itself should take an active interest in measuring dust levels. If they are found to be consistently high then steps must be taken to lower the dust levels to those regarded as 'safe'. Surely this is the least that can be asked of a company with such a poor record of interest in the health of their employees.

It would be much appreciated if you would bring my point of view to the attention of the management.

Yours sincerely,

(D. H. Latham)
PHYSICIAN
OCCUPATIONAL HEALTH SECTION.

20th September, 1961.

Dr. H. Maynard Rennie,
 Macquarie Chambers,
 183 Macquarie Street,
 SYDNEY. N.S.W.

Dear Dr. Rennie,

Asbestosis - Wittenoom Cause

As you know, I have discussed with Dr. Bruce Hunt the incidence of pneumoconiosis in workers and ex-workers from the Australian Blue Asbestos Works at Wittenoom. I have been able to locate in Perth records of 12 cases of asbestosis, plus three probable cases, four cases of silicosis or silico tuberculosis, six cases of probable silicosis and one in which asbestosis and silicosis both appear to be prominent. Some of the cases of asbestosis also show evidence of silicosis. The total which I have given you is 26 cases. I believe that Dr. McNulty has several not on my list.

When it is known that the labour turnover at Wittenoom has been high, this is indeed a large number of cases. It is noteworthy that some of these have been diagnosed several years after leaving Wittenoom and it is not improbable that more will present in the future.

There is no doubt that early conditions at Wittenoom were appalling. I have had several eye witnesses' descriptions of the dust around the mill being so thick as to occlude vision for more than a few yards. When I visited Wittenoom in July, 1958, exhaust ventilation had been established in the old mill; the new mill had been built but was not operating. Certainly considerable attention had been given to exhaust ventilation in the new mill. At this time (July, 1958) the old

Cont'd.....

DISTRICT HOSPITAL

KALGOORLIE.

JMcF. AB.

Date 19th September, 1961.

Dr. Bruce Hunt,
37 Ord Street,
WEST PERTH.

Dear Dr. Hunt,

Many thanks for sending me a copy of Dr. Rennie's letter. A copy of my reply is enclosed.

I may have been a little too hard but the language is certainly plain.

Thanks again for your interest.

Kind regards,

Jim McF.

doubts concerning the statement that everything possible has been done. I have reason to believe that much of the dust extracting machinery is ineffective at times and, further, before extracting the dust, some means of disposing of it away from the workings should be discovered. Increased production should go hand in hand with ventilation and not precede it. Frankly, I do not think that the company (C.S.R. or A.B.A.) know how to control the dust.

In little more than 10 years the industry has produced 20 cases of industrial chest disease (including one proved cancer) and a number of suspected cases. As the years go on I have no doubt that many more will come to light. It should be remembered that many experts in this field claim that the asbestos fibre takes many years to produce significant pulmonary disease. If this is true, the men diagnosed now represent gross pathology and exposure, and the real nature of the hazard, in terms of disease, may not become apparent for another 10 years.

No one connected with this problem should rest until conditions at Wittenoom are ideal and the foregoing does not suggest that this stage has been reached. The known hazard is real enough but reading papers on pleural mesothelioma (notably J.C. Wagner, C.A. Sleggs & P. Marchand, British Journal Indust Med 1960, 17, 260) one is left with a suspicion that a combination of individual idiosyncrasy and minimal asbestos exposure, such as from road surfacing, may be dangerous.

I have written this letter because Dr. Hunt has assured me of your good faith and in the hope that your influence may effect an improvement in the working conditions of the asbestos workers which we have been unable to achieve through the regular channels in W.A.

Yours faithfully,

J. McNulty
CHEST PHYSICIAN

The inspector commented that there were asbestos fibres in every underground sample (the Konimeter used for dust sampling is not a reliable instrument for counting asbestos fibres). Dust and fumes were obvious during the afternoon shift.

He quotes the following figures:-

Average dust count for day shift	- June, '60	- 230	P.P.C.C.
" " " " " "	- Nov. '60	- 180	P.P.C.C.
" " " " " "	- Aug. '61	- 420	P.P.C.C.
Average dust count for afternoon shift	- Nov. '60	- 110	P.P.C.C.
" " " " " "	- Aug. '61	- 630	P.P.C.C.

All these averages are very crude and the individual readings vary greatly.

The mine air seemed more dust laden than ever, due to increased production. Outside sources contribute, and the main Adit air is polluted by dust from the mill (130 P.P.C.C. in one instance).

In the Mill, figures were as follows:-

Average Dust count	- June, '60	- 330	P.P.C.C.
" " " "	- Sept. '60	- 420	P.P.C.C.
" " " "	- Nov. '60	- 460	P.P.C.C.
" " " "	- Aug. '61	- 390	P.P.C.C.

At the primary crusher, figures of 1000 + P.P.C.C. were recorded.

These figures speak for themselves and do not suggest that conditions have improved over the last 3 years.

The statement in your letter concerning the lack of "a well developed conscience" did not come from me. I have always found Mr. Allan and Mr. Thomas courteous and helpful. One cannot help feeling that production comes first and that the health of the workers receives secondary consideration. The primary concern of a Company, is to produce a product profitably, but it has been shown, time and time again, that apart from gross exploitation of labour, this is best achieved where the interest and health of the workers is considered. The contrary, where the product is produced at the expense of the health of the worker, cannot be tolerated in a civilised community. If I thought that this state of affairs existed at Wittenoom, and I could not correct it or else close the mine, I would resign. What I do say, is that the dust hazard is not properly appreciated and that the companies attitude is ostrich-like. I am certain that working conditions are not ideal and have very grave

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DISTRICT HOSPITAL

KALGOORLIE.

JMcN. AW.

Date 18th September, 1961.

Dr. H. Maynard Rennie,
Macquarie Chambers,
183 Macquarie Street,
SYDNEY.

Dear Dr. Rennie,

Dr. Hunt has kindly forwarded a copy of your reply to his letter concerning conditions at Australian Blue Asbestos, Wittenoom, W.A.

My approach to the problem is entirely medical, I am not an engineer and my concern for the health of the workers at Wittenoom, is caused by the number of men seriously affected by silicosis/asbestosis at relatively early ages and short exposures. These include a malignant pleural mesothelioma after two years as a shift boss in the mill. At considerable personal inconvenience, I have visited Wittenoom on two occasions, and in my opinion, conditions in the mill were worse in August, 1961 than in November, 1959. In certain levels when a light breeze stirred the dust, visibility was appreciably reduced. Running a hand along a rail, produced a mound of black dust containing coarse asbestos fibres. Hands, hair and clothes were filthy with dust after a short time, admittedly some of this dust is innocuous. Colour photographs show that the mill and surroundings are enveloped in a pretty but lethal blue haze. During my visit, most of the men were wearing respirators and this, in itself, is a confession of complete failure in dust control. I do not see how a man can work in near century summer heat wearing a respirator continuously, at any time his efficiency must be greatly reduced. Dust extracted from the mill finds its way into the main underground air intake. Dry ore residue is dumped a few hundred yards from the main workings and in a breeze, blows all over the place. Even in the township much of the road and path surfacing is made of waste material from the mine and blue asbestos fibres are obvious.

Mines Department inspectors have prepared reports on dust conditions at Wittenoom and I would refer you to them. During an inspection between August, 14th and August, 19th, 1961 dust counts of 1000 + P.P.C.C. were not uncommon in mine and mill. This is over three times the maximum permissible concentration of dust containing free silica and the rock mined is highly silicious.

11th September 1961

Dr. D. Lotham,
Public Health Department,
57 Murray Street,
PERTH. W.A.

Dear Don,

113
I enclose a copy of Ted Rennie's reply which arrived this morning and also a copy of my letter to McNulty despatched immediately thereafter. If you yourself could write directly to Ted and also to Allan, as I have suggested to Kity, it would, I am sure, help considerably to start the ball rolling in the right direction.

With regards,

114
37 OLD STREET
WEST PERTH

11th September 1961

Dr. J. McNulty,
The District Hospital,
KALGOORLIE. W.A.

Dear Dr. McNulty,

I have just heard from Ted Rennie and enclose a copy of his very disappointing letter. It seems clear that the C.S.R. people are being rather unctuous and self-righteous about their doings. With respect I would suggest that Ted (whose address is 183 Macquarie Street, Sydney) whom I have always found to be a very reasonable person, would derive a good deal of benefit from a personal letter from you setting out the situation in plain language. It might also help if you sent a note to Allan King telling him the situation. I am sure Allan would back you up and would, if necessary, get at Ted personally.

With best regards,

Bruce Kent

113
H. MAYNARD RENNIE

F.R.C.P. (LOND.) F.R.A.C.P.

TELEPHONE: BW 7711

CABLE: A.F.W.3 XL 2540

MACQUARIE CHAMBERS,

183 MACQUARIE STREET,

SYDNEY

7th September, 1961.

Dr. Bruce Hunt,

37 Ord Street,
WEST PERTH. W.A.

Dear Bruce,

I have just had a conference with the Officers of C.S.R. concerning the Wittenoom problem. It appears that some three years ago a lot of money was spent on improving the very bad dust conditions at the mill and this has lead to a much improved atmosphere in which the men now work. It is suggested that it is as yet too early to determine the benefits or otherwise of the improved conditions but they feel that they have gone as far as they can with the present knowledge and they are quite willing to look at any further information that may be forthcoming.

Following my meeting with the Officers I am very firmly of the opinion that your statement "Both Doctors are of opinion that the Company has not got a well developed conscience on the matter and feel very strongly that very urgent action is required" can hardly be justified by the facts. However, for my own information I shall see Allan King and I shall also ask McNulty to send me more information about the measurement of dust counting in the asbestos industry referred to in the Addendum to his report, 1959.

It is not intended therefore that I should come over to Wittenoom in the immediate future. I shall certainly let you know if there is any change in plans and if you have any further information on the subject I shall be delighted to receive it. I will keep you posted.

Warmest regards and many thanks.

Yours sincerely,

Tsh

H. MAYNARD RENNIE

Have symptoms

8/9/61

88-6

Dr. Letham

Investigation of cases from Wittenoom.

some
investigation
of cases

Pretty firm diagnosis of asbestosis		12 cases
Probable asbestosis		<u>3</u>
		15 cases

Investigation
of cases

Silicosis		4
one of which is probably silicotuberculosis		
probable silicosis		<u>6</u>
		10 cases

pneumo - silicosis and asbestosis		1 case
-----------------------------------	--	--------

~~Not~~ investigated or seen by Perth doctors 26 cases in all

H. MAYNARD RENNIE
F.R.C.P. (LOND.) F.R.A.C.P.

TELEPHONE: BW 7711
(AREA 4 R.M.) XL 2340

MACQUARIE CHAMBERS...
183 MACQUARIE STREET.
SYDNEY

7th August, 1961.

Dr. Bruce Hunt,
37 Ord Street,
WEST PERTH, W.A.

Dear Bruce,

Thank you very much for your two letters with enclosures concerning the problems of the workers at Wittenoom. It is certainly not a pleasant picture, and I have conveyed the information referred by you to the appropriate officer in C.S.B. He is, indeed, most grateful for the interest taken in the problem and they are, at the moment, investigating the report.

It is possible that I may come over at the Company's request and your detailed timetable is most interesting in this regard as well as being very helpful indeed. I shall keep you posted as soon as I know any more.

Warmest regards,

Yours,

Handwritten signature
H. Maynard Rennie.

1st August 1961

Dr. H. Maynard Rennie,
183 Macquarie Street,
SYDNEY N.S.W.

My dear Ted,

Further to the possibility of your coming over to Wittenoom I have had a lengthy consultation with Don Latham regarding plane timetables and the like. It would seem that the most suitable programme would be for you to leave Sydney on a Friday, arriving in Perth on Friday night. On Saturday it would be arranged for you to confer with Dr. Latham and Dr. McNulty and to see in the flesh, with accompanying films, not less than ten ex-Wittenoom workers who are currently under medical treatment in various hospitals in the Perth District suffering from asbestosis or silicosis. We would hope that you would take the evening meal with us on the Saturday and would fly to Wittenoom on Sunday morning leaving Perth in the wee small hours. You would then have most of Sunday, all of Monday and Tuesday and portion of Wednesday morning in Wittenoom which should give both you and the ventilation engineer ample time to see the situation on the spot. Wednesday's 1.10 p.m. plane would get you to Perth before dinner and you could then either retire to your couch or again do us the honour. Thursday could be spent in consultation with Latham and McNulty, and possibly with your office people. You could then go back to Sydney by the night plane on Thursday, by the morning plane on Friday, or by the night plane on Friday as you wished.

I do most sincerely hope that you can see your way clear to follow our suggestions. The saving of life would undoubtedly result and further the step would raise considerably the estimation in which the Company is held in these parts by the Health Authorities. Since I last wrote I have seen several more of the films of the patients currently under treatment in Perth; they would not constitute very good propaganda for health in the asbestos industry.

With best regards,

trip to Darwin and Wittenoom, we should have more
details information. When the occasion arises I
shall communicate with you again.

Yours sincerely,

D.D. Len

(D.D. Len)
PHYSICIAN
DEPARTMENT OF PIC HEALTH.

secondly, it might be difficult to get together on Saturday afternoon several people from several hospitals who would probably wish to present their own cases. This leaves but one alternative:-

To leave for Wittenoom on a Tuesday at 6.45 or 7.30 a.m., arriving there at 1.10 p.m. The return trip would have to be made on the following day, leaving Wittenoom at 1.10 p.m. via the Fokker Friendship. This would give little less than 24 hours in Wittenoom, which, if carefully planned, would probably suffice for the purpose. It would be necessary to use the Tuesday afternoon for inspection, the evening would have to be spent in discussions with management, and, on the following morning, Wednesday, the inspection could be continued. It might be desirable for a ventilation engineer to stay for a longer period but I think that this time would be sufficient to allow Dr. Rennie a reasonable appraisal of working conditions. With this programme he could come over in the weekend on Saturday or Sunday, spend Monday with us here in Perth (see (a) on previous page) and, if need be, spend further time with us on Thursday and/or Friday.

It does not seem practicable to consider the possibility of returning, via Roebourne, on Friday. The plane leaves at 7.55 a.m. and it is approximately 180 miles by road from Wittenoom to Roebourne.

I have requested Dr. Elphick of the Perth Chest Hospital and Dr. Harris of the Repatriation General Hospital to let me have a list of cases of asbestosis which have been admitted to their wards. These will include cases which are complicated by silicosis. Royal Perth Hospital has no record of any admissions but I know of a recent one which has not yet had time to be classified in records. In addition there will be cases known to Dr. McNulty and possibly one or two from the Chest Clinic not known to him. I also know of at least one referred by a colleague, not on Dr. McNulty's list.

By the time that Dr. McNulty returns from his

Cont'd.....3.

GOVERNMENT OF WESTERN AUSTRALIA

DEPARTMENT OF PUBLIC HEALTH
57 MURRAY STREET
PERTH

DDL/CT

LETTERS: BOX 124,

G.P.O., PERTH

TELEPHONE: 23 1851

All communications to be
addressed to the
"COMMISSIONER OF
PUBLIC HEALTH"

26th July, 1961

Dr. Bruce Hunt,
37 Ord Street,
WEST PERTH.

Dear Dr. Hunt,

Possible Visit of Dr. Rennie

Following our discussion, it is thought that Dr. Rennie would need to -

- (a) spend some time in Perth in discussion; and examination of case histories and chest x-rays of employees and ex-employees,
- (b) visit Wittenoom,
- (c) probably have further discussions in Perth.

The M.E.A. timetable (which is enclosed) does not readily lend itself to this programme. There are four weekly return trips. Of these, the plane leaving on Sunday at 5.15 p.m. would predicate the need for spending the weekend in Wittenoom - not desirable. The plane leaving on Saturday at 11.25 a.m. stays overnight at Meekatharra to arrive in Perth after midday on Sunday - also not desirable. This leaves, then, planes leaving on Tuesday and Wednesday. Of the two the Wednesday trip (Fokker Friendship) is the faster. This limits the days for leaving Perth to Sunday and Tuesday. Leaving on Sunday would mean arriving in Wittenoom at 8.45 a.m. No doubt the day could be pleasantly spent having a look at the Gorge and/or preliminary discussions. Monday and half of Tuesday could then be spent in Wittenoom, departing thence at 1.30 p.m. on Tuesday. This would presuppose spending Saturday in Perth on item (a) above, which would, in turn, indicate the need for leaving Sydney on the Friday. (There is, in fact, an A.N.A. service which leaves Sydney at 4 p.m. on Friday, arriving in Perth at 9.25 p.m.). I do not think that this would be practicable. In the first place it would probably be too much of a rush for Dr. Rennie, and

Cont'd.....2.

Dr. H. Maynard Rennie

25th July 1961

P.S. Perhaps the worst case which was demonstrated to me yesterday was of a man who worked for two years only in the mill at Wittenoom some years ago, had not been in a dusty atmosphere since and who died the other day of a malignant pleural mesothelioma and pulmonary asbestosis and silicosis.

I enclose copies of some relevant reports and would, if possible, like to have these back in due course.

103
25th July 1961

Dr. H. Maynard Rennie, F.R.C.P., F.R.A.C.P.,
183 Macquarie Street,
SYDNEY NSW.

My dear Ted,

The plot thickens a little concerning the asbestos mine at Wittenoom. By arrangement Dr. McNulty, the Mines Medical Officer, whom I had never had the pleasure of meeting previously, and Dr. Don Latham, the industrial disease expert in the Public Health Department here, whom I know well and regard very highly, came to see me yesterday and we traversed the whole field. Before I go any further, I must ask you to be very careful about the way in which you utilise the story which I am about to tell you because Dr. McNulty and Dr. Latham both make it very clear that the optimistic statement which Mr. Allan made to me regarding the incidence of "dueting" at Wittenoom, which I quoted to you in my letter, does not convey an accurate picture. Latham and McNulty both regard the working conditions at Wittenoom as very poor and state indeed that they constitute a public menace. They showed me a number of films taken during the routine survey of mine workers and had the clinical history of these men with them; apparently it is quite possible to be so badly dusted as to be totally and permanently incapacitated within four or five years. Both doctors are of opinion that the Company has not got a well-developed conscience on the matter and feel very strongly that very urgent action is required. It would obviously be much better from every point of view if the initiation of better ventilating measures came from within the Company than as the result of external pressure by Mines and Health Departments. As you know, in Western Australia at the present time we are endeavouring to boost our production in every possible way and a public outcry is not going to help to attract Western Australian mining capital to the State. It would also, I am sure, bring about very considerable difficulties for the Company in securing and maintaining an adequate labour force. On the other hand from what McNulty and Latham tell me action must definitely be taken. My suggestion would be that, if you can spare the time, the C.S.R. authorities should send you and a consultant ventilation engineer on a tour of inspection. We could make arrangements here so that on the day following your arrival McNulty and Latham, with their films and their case records, could be at your disposal for the day. You could fly to Wittenoom on the following morning, spend two or three days there, fly back to Perth and have another day with the two doctors, and be back in Sydney inside a working week.

I do ask you to regard this request very seriously because both McNulty and Latham are competent men of good faith and the records and films which they showed me yesterday, and the figures which they quoted are quite horrifying.

With best regards,

H.M.R.

KALGOORLIE.

JMcN. AW.

21st July, 1961.

Dr. Bruce Hunt,
37 Ord Street,
WEST PERTH.

Dear Dr. Hunt,

Thank you for your invitation to lunch on
Monday, 24th July, which I accept with pleasure.

Yours sincerely,

37 ORD STREET
WEST PERTH
20th July 1961

Dr. J. McNulty,
Mines Medical Officer,
District Hospital,
KALGOORLIE. W.A.

Dear Dr. McNulty,

Can I have the pleasure of your company at lunch in my rooms at 1 p.m. on Monday, 24th July, the day on which you expect to be in Perth. I shall look forward to the pleasure of meeting you and discussing the Wittenoom situation, and I have asked Don Letham to join us. The Consultant Medical Officer to the C.S.R. in Sydney is a close personal friend of mine and after our discussion I shall make it my business to inform him fully regarding your findings; I have a feeling that he is not conversant with what is actually happening in the mine and the mill.

Sincerely yours,

Bruce Hunt

An unforeseen, but highly beneficial by product of the warning to Mr. . . . has been the alerting of the C.S.R. to the grave health hazard existing in there subsidiary company and a real effort is now being made to improve conditions.

I have to go to Darwin on Monday, 24th July '61, returning via Wittenoom to examine workers. I would very much like to see you and could, perhaps, call at your rooms, by appointment, on Monday afternoon, 24th July. I would like to see Dr. Merritt's X-rays. One of our difficulties is that the Mobile X-ray Unit filming at Wittenoom cannot produce technically, perfect and consistent Chest X-rays.

Attached are a few recent reports which I prepared on the health of asbestos workers. I don't wish to bore you, but I am grateful for your interest.

Kind regards,

Yours faithfully,

J. McNulty

MINES MEDICAL OFFICER

KALGOORLIE.

JMcN. AW.

14th July, 1961.

Dr. B. Hunt,
37 Ord Street,
WEST PERTH.

Dear Dr. Hunt,

Thank you for your kind letter and report on Mr.
of Wittenoom.

I agree that a diagnosis of asbestosis cannot be established on the strength of the X-rays alone and am naturally pleased to have that opinion confirmed. He has never been formally diagnosed as suffering from pulmonary disease. Because of his length of time in the industry and the minimal changes at both bases in 1960 as compared with his original X-rays it was considered advisable to warn him of the possibility of developing industrial chest disease so that he would avoid unnecessary exposure to asbestos and silica dust.

As you know, the diagnosis of asbestosis in the early stages is extremely difficult and must often be presumptive. A normal Chest X-ray does not exclude it and the presence of asbestos bodies does not confirm it. The inaccessibility of Wittenoom and its distance from the commonly accepted ancillary aids to diagnosis make it even more difficult.

Under ordinary circumstances there would be no urgency and it would be better to wait a year or two before suggesting a diagnosis affecting a workers health and livelihood. Dust control at the mine and mill at Australian Blue Asbestos was and is bad. Workers have developed asbestosis and silicosis with gross clinical and radiological signs and grave disability after relatively short exposures. Failure to advise a worker that there was some doubt about his X-ray and delaying a decision for a year might expose him unwittingly, to half as much dust again. The diagnosis might then be certain but the effect on his health disastrous.

Histological proof of many of the diagnoses made, has been obtained from post-mortem material and from sections obtained at lung biopsy and during pulmonary resections. A few weeks ago post-mortem on a man aged 47 years, who had worked for 2 years only in the mill at Australian Blue Asbestos (1949-51) confirmed that he had a malignant pleural mesothelioma and pulmonary asbestosis and silicosis. A pretty shocking finding in a modern industry.

11th July 1961

Dr. J. McNulty,
Mines Medical Officer,
District Hospital,
KALGOORLIE. W.A.

Dear Dr. McNulty,

Thank you for the loan of your films of Mr. [redacted] and for your letter of 26th June. I myself was perfectly happy with my clinical findings in Mr. [redacted] about a stone of superfluous weight and a B.P. of 160/100 were the only physical abnormalities I could detect. Clinically the lungs appeared to me perfectly normal and the chest movements fully up to normal standards. Arthur Merritt of the Perth Radiological Clinic took a fresh series of films at varying exposures to make them comparable with your films, and he was of opinion that a diagnosis of asbestosis could not be established upon the films alone.

I would much appreciate the opportunity of a chat with you regarding Mr. [redacted] case and asbestosis in general when next you are in Perth. Perhaps you could spare a moment to let me know when your next visit is likely to be. If fairly soon perhaps I could hold the films until then; if however you won't be in Perth in the immediate future I shall return the films to Kalgoorlie with the hope that you will bring them down again when you are next passing this way. Please let me know also whether you would like to see Dr. Merritt's films and his report.

With kindest regards,

I am,
Yours very sincerely,

Bruce Hunt.

H. MAYNARD RENNIE
F.R.C.P. (LOND.) F.R.A.C.P.

TELEPHONE: BW 7711
(AFTER 4 P.M.) XL 2540

MACQUARIE CHAMBERS,
183 MACQUARIE STREET,
SYDNEY

10th May, 1961.

Dr. J. McNulty,
District Hospital,
Falconrie,
WESTERN AUSTRALIA.

Dear Dr. McNulty,

Thank you very much indeed for your letter with enclosed clinical notes and chest X-rays of Mr. [redacted] which I received when I was in Perth recently.

As you indicated, it is not easy to reach a definite diagnosis in this man's case, and on his history as given to me by himself I would like to be assured of the complete normality of his cardiovascular system. Accordingly I have asked that Mr. [redacted] be referred to Dr. Bruce A. Hunt of Perth for physical examination and report. I have asked Mr. P. Thomas to forward the X-rays to Dr. Hunt, and then to collect them again as soon as Dr. Hunt has finished with them. Mr. Thomas will then return the films to you, and I shall send you a copy of Dr. Hunt's report. Dr. Hunt will no doubt discuss the problem with Dr. D.D. Letham as you have suggested.

With kind regards,

Yours sincerely,



H. Maynard Rennie.

There is no need to comment on the figures save to say that only the huge labour turnover (over 70% of workers have worked at Wittenoom for 3 years or less) prevented large numbers of men from being affected. The concurrent dust counts prepared by the Senior Inspector of Mines showed how dusty the mill and mine really are, and the results of the chest x-ray examinations show the effect. It would appear that silicosis is a more serious problem than asbestosis and that frequently the disease is of a mixed type. This explains why the classical radiological appearance of asbestosis is rarely seen.

It is also worth noting that mere presence at the mine or mill over a relatively short period is sufficient to produce disease and that unlike the Gold Mines, the actual occupation of the worker is not too important.

An attempt was made to x-ray the men employed in transporting the asbestos bags to the coast, but only a few were actually done. It is desirable that these workers and those engaged in loading asbestos at the docks should be examined regularly and their conditions of work investigated.

Effective dust suppression at Australian Blue Asbestos, is an urgent and immediate necessity.

J. McNulty
CHEST PHYSICIAN.

24416 8 ym ABA F+G } vol now
Mar 18, 81 } on obj ABA

41406 3 y 1/2 ABA
F+G

44083 1 y 1/2 ABA 1961
1962-8 2 y 1/2 17 on Mt. G. 9 Jan 1961
Toman Dr. Linn. 1965-5-18

15559 winter 7 ym 1/2 ABA
T. 73 to class vol. 1962-8

The following are the results of the chest x-ray examination of workers employed for more than one year at Australian Blue Asbestos, Wittenoom, examined by the Mines Mobile X-Ray Unit during September, 1960. A few workers have been excluded but their exclusion does not affect the over-all picture. Also excluded are men diagnosed as suffering from industrial chest disease in previous years, who have left the industry.

The diagnostic symbols represent:-

- N. No evidence of industrial chest disease or other pulmonary pathology.
- F+ Increased lung markings of a non specific type possible due to the very earliest stage of silicosis or asbestosis, but too inconclusive to justify even a provisional diagnosis.
- F+(s+) Fairly conclusive evidence of Silicosis/asbestosis and the men concerned have been advised to leave the industry. Definitive diagnosis awaits further investigation to exclude other pulmonary disease and to assess disability, if any.
- S+ Silicosis and/or asbestosis.

X-RAY CLASSIFICATION

No. of years at Aust. Blue Asbestos.	N.	F+	F+(s+) & S+	% of worker affected per year of exposure. (F+s+, S+)
1	71	-	-	0%
2	43	1	-	0%
3	24	5	1	3%
4	6	4	3	23%
5	2	4	-	0%
6	4	2	3	33%
7	1	4	4	44%
8	1	2	2	40%
9	-	-	3	100%
10	1	1	1	33%
11	1	1	-	0%
12	-	-	2	100%
13	-	1	-	0%
Total:	154	25	19	10%

(The men with normal chest x-rays after 10 years exposure, and the men with 13 years exposure and F+ diagnosis work in the

GOVERNMENT OF WESTERN AUSTRALIA

DEPARTMENT OF PUBLIC HEALTH
57 MURRAY STREET
PERTH

in reply, please quote

LETTERS, BOX 124,
G.P.O., PERTH

TELEPHONE: 231851

All communications to be
addressed to the
"COMMISSIONER OF
PUBLIC HEALTH"

21st Nov. 1960.

Dear Dr Hunt,

Asbestosis

Here are two articles relevant to our
problem:

"Pathology of Asbestosis" - Lynskey

Aust. J. Indus. Health Feb 1955; 11:185

"Asbestosis" - Myers

Post Graduate Medical Journal Dec 1949; 25.

On p. 636, top left hand corner, reference
is made to occasional blood flaking of
sputum.

It is now accepted that the incidence of
carcinoma of the bronchus is high in
asbestosis. For this reason, blood flaked
sputum, or, ^{pink} haemoptysis, should alert one
thoughts to this condition, rather than
pulmonary tuberculosis (as per Price).
Apparently, there is no increase in the
incidence of pulmonary tuberculosis in
patients suffering from asbestosis.

I hope that you'll find these references of
some help.

Sincerely yours,
D. B. Latham

DISTRICT HOSPITAL

K. J. GOORLIE

JNCH: XV.

Date 13th October, 1960

Mr.

Dear

I regret to advise that your recent chest shows changes very suggestive of industrial diseases, probably an early stage of Asbestosis, complicated by silicosis. You probably picked this up in earlier years when you were more intensely concerned with the mill. As you know I was a bit suspicious last year, but the changes were too indefinite and we don't usually associate managerial staff with industrial chest disease.

No final decision has been made and you will not receive formal notice from the Honourable Minister for Mines until your condition has been further investigated. If you will be in Perth in the near future please let us know and I will arrange for you to have further x-rays, lung function and sputum tests as an out-patient, at the Perth Chest Hospital. I will not be in Perth until February 1961, but you could consult Dr. Letham at the Public Health Department - he is fully in the picture and could advise you.

There is no immediate need for concern, but naturally you should avoid further exposure to harmful dust like the plague until your chest condition has been completely investigated.

If you have any questions or need any advice, please write.

Yours sincerely,

P.S.

It will take some time to complete my review of the x-rays of your workers, but I am not too happy about the general trend.

MINES MEDICAL OFFICER.

Copy: Dr. D. D. Letham.

DISTRICT HOSPITAL

KALGOORLIE

JMcN:MKV.

Date 6th October, 1960

Dr. D. D. Letham,
Physician,
Public Health Department,
57 Murray Street,
PERTH

Dear Dr. Letham,

The Senior Inspector of Mines has kindly given me a copy of his findings at Wittenoom. Briefly the concentration of dust in both the mill and the underground workings is shocking. The amount of dust falling on the lawn outside the mill office would not compare favourably with conditions underground in some gold mines. Silicosis is probably a much greater hazard than we had imagined and this probably explains why all the men who have developed abnormal chest x-rays appear to have a mixture of silicosis and asbestosis.

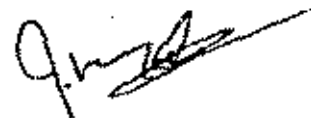
There was little correlation between the readings of the Midget-Impinger and the Konimeter. The Konimeter generally gave much higher total particle counts and the Impinger higher fibre counts, but the readings were too inconsistent to give a worthwhile comparison. The Inspector suggested that inexperience with the Impinger may have been the cause and he feels that it is a good instrument for use at Wittenoom.

The Senior Inspector of Mines has made many recommendations to the Company and the Mines Department have the power, under the Mining Acts, to see that the dust hazard is eradicated. It remains for us to keep hammering the health aspect and maintain the sense of urgency required.

A preliminary review of the Wittenoom films, shows how urgent the problem is. It is too early to commit myself, but I feel that the general picture is worse than ever.

On completion of the review I think it would be a good idea to send a copy of all the results to the Company for their information.

Yours faithfully,



J. McNulty
CHEST PHYSICIAN.

I should not have been so specific in regard to a Midget-Impinger since you may know many instruments of equal, or greater, value.

The whole picture of industrial chest disease in this state is disappointing and, whilst I have no remedy to offer, I feel that much closer liaison and co-operation between your Department and mine is needed. For my part, I should be very pleased to assist medically in any problem connected with the mining industry.

The School of Mines have a Midget-Impinger which was apparently bought through Sandovers. †

Kind regards.

J. McNulty
MINES MEDICAL OFFICER.

Enclosures: 1) Literature from Canada.
2) Brochure from School of Mines.
3) List of references supplied by Mr. Quartermaine.

Please return numbers 1) and 2).

*1. x. 60. Please call from McNulty
The Mine Medical Officer has been informed
a Midget Impinger. I have everything in A
order to be done with arrangements
which will be done by the School of
Mines. Tregouret*

W. J. Latham
Blundell & Co. Ltd.
New Brunswick

DISTRICT HOSPITAL

KALGOORLIE

JMcN:EI.

Date 29th July, 1960.

Mr. W.R. Brisbane,
State Mining Engineer,
Mines Department,
PERTH.

Dear Mr. Brisbane,

Thank you for your letter. I do not pretend to be familiar with engineering methods or the details of dust sampling and my opinion on these matters is that of an interested physician only. My concern for the health of the workers at Wittenoom prompted me to investigate the whole problem of the Asbestos Industry and this lead to an appreciation of the need for an accurate count not of dust particles only but of asbestos fibres as well, particularly of a critical size, i.e. over 10 microns in length. The Konimeter does not appear to be the best instrument for this purpose.

Mr. Jennings, General Secretary, Chamber of Mines, kindly obtained some information from Canada and a Midget Impinger was recommended as the most suitable instrument for use in the Asbestos Industry. I understood that the Senior Inspector of Mines had received copies and had forwarded them to the Mines Department in Perth.

In the diagnosis of Pneumoconiosis a detailed knowledge of the occupational history and working conditions is essential. This is particularly true of asbestosis, the diagnosis of which presents many difficulties. It is accepted, for example, that a person with a completely normal chest x-ray may be suffering from asbestosis, and, contrarily, that the presence of the peculiar so-called asbestos bodies in the sputum is not necessarily diagnostic of the disease.

The Mobile X-Ray Unit will be conducting the periodical examination of workers at Wittenoom between the 9th September and the 26th September, 1960. A simple classification of workers by occupation could be made and used by an inspector from the Mines Department and the Mobile Unit. If an accurate estimation of the concentration of dust, (particularly critically sized fibres), to which each worker is exposed were made available to me, it would greatly facilitate the examination of the workers.

SCHOOL OF MINES

28th July, 1960.

Dear Dr. McNulty,

I have been able to locate the following references to the Midget Impinger:

U.S.B.M. I.C.7026: A technique for use of the Midget Impinger.

U.S.B.M.-R.I.4802: Size of smallest particles determined in impinger dust counting methods.

U.S.B.M.-R.I.4568: Relation between and precision of dust counts from simultaneous Impinger, Midget Impinger, Electirc precipitator, and Filter paper samples. (not available at K.S.M.).

U.S.B.M.-R.I.3360: Midget Impinger for dust sampling (not available here).

Conveyor 8/55 p.3: Dust prevention at Zinc Corporation and use of the midget impinger to check dust concentrations.

Drinker & Hatch (2nd Edn 1954) "Industrial Dust" pp.150-155 plus extensive bibliography.

"Pneumoconiosis Abstracts" Vols. 1, 2, and 3: Various abstracts of articles referring directly and indirectly to impingers and midget impingers.

In addition there are some references to the milling of asbestos:

Can. I.M.M. Bull. 8/55 p.486: "Asbestos Milling at Jeffrey Mill of Canadian Johns-Manville, Quebec."

Of the above, probably Drinker and Hatch and the U.S.B.M. publications give most information.

Yours sincerely,

Sgd. M.K. Quartermaine.

DISTRICT HOSPITAL

KALGOORLIE

JMcN:EI.

Date 1st July, 1960.

The Under Secretary,
Mines Department,
PERTH.

Dear Sir,

I am not very familiar with the details concerning the transport of Asbestos from Wittenoom to the coast, but understand that it is by private contract and that the workers are not the concern of your Department. These workers may be exposed to the hazard of Asbestos dust equal to, if not greater than, the mill workers at Australian Blue Asbestos. This may also apply to the men engaged in loading ships at Port Sampson, depending on the methods adopted.

An effort will be made to examine all these workers during the visit of the Mines Mobile X-Ray Unit later this year, on a voluntary basis.

This matter is brought to your attention because the conditions of employment of these workers should be investigated, the dust hazard estimated, and if a hazard exists, consideration given to the inclusion of the workers within the scope of the Mines Regulation Act and The Mine Workers' Relief Act.

A copy of this letter has been sent to Dr. Letham and you may wish to discuss it with him.

Yours faithfully,

Dr. D.D. Letham,

J. McNulty
CHEST PHYSICIAN.

Now you include a reminder that many of the workers are casual labourers in loading material & therefore examination, initial certification, & other examinations may be difficult to get on hand.

Byers

exposure to asbestos dust was four years.

Three workers with a mixed gold and asbestos mining history have developed silicosis and asbestosis. Four workers with a similar mining history have developed pure silicosis. Of these seven workers the average exposure to dust including all mining was 12 years and excluding previous mining (which is not entirely justifiable) was 7 years.

Conclusion:

The percentages quoted above (i.e. 42% of asbestos workers suffering from industrial chest disease with over 4 years exposure compared with 1% of gold miners with over 10 years exposure) are crude and probably paint too black a picture of the conditions which existed. With a shifting working population it is almost impossible to work-out accurate incidences. However, the very high labour turnover at Wittenoom is necessarily associated with a short average exposure per worker and many workers at risk were protected simply because their exposure time was too short. At least one of these short-term workers has been diagnosed as suffering from Asbestosis many years after he left the industry.

The problem is essentially one of ventilation conducted with a proper appreciation of the relative importance and medical significance of the asbestos fibre as distinct from the silica particle. Despite the many marked improvements which have been effected at the Mine and Mill, I am not satisfied that the risk of industrial chest disease has been eradicated or even brought to par with the risk of Silicosis in the gold-mining industry. The prevention of industrial chest disease is a medico-engineering problem and requires close liaison between the Mines Department, who are responsible for ventilation and dust counts, and the medical officers, who are responsible for the periodical clinical and chest X-ray examinations.

CHEST PHYSICIAN AND
MINES MEDICAL OFFICER.

Memorandum:

Dr. King.

4th May, 1960.

The dangerous particle size in Silicosis is less than 5 microns, in Asbestosis the dangerous fibre length is between 20 and 40 microns. The dust counts are therefore of little value unless they show the number of fibres per cc within that range. The Konimeter in use in this State is not regarded as an effective instrument for dust counting in the Asbestos industry in Canada. A Midget-Impinger is used. It is stressed that fibres over 10 microns in length are of particular importance and whilst the total dust concentration should be below 10 million particles per cubic foot of air, The maximum fibre count (ie over 10 microns in length) permitted, is 1 million fibres per cubic foot of air.

Many workers remain at Wittenoom for less than one year and less than 50% of the work force, at any one time, have been continuously employed for more than four years. A very rough estimate of the percentage of workers, with over 4 years exposure and suffering from industrial chest disease is 12% (estimated by expressing the number of workers, detailed below, as a percentage of the number of workers examined in 1959 whose initial mining certificate was issued prior to 1955.)

In recent years it would be unusual to diagnose Silicosis in a gold miner with less than 10 years exposure. E.g. in 1958, there were no new cases of Silicosis in the 0-10 year group, 20 cases in the 10-20 year group and 29 cases in the 20-30 year group. Expressed as a percentage of the total number of mine workers this gives an annual incidence of Silicosis of approximately 1%. These percentage incidences are not very accurate and are not really comparable, but they do illustrate the grave hazard which existed at Wittenoom compared with the general mining industry.

The following are the particulars of cases of industrial disease detected at Wittenoom since 1958. The list is complete as far as our records go, but there may be a few cases diagnosed elsewhere who were not examined under either of the relevant Mining Acts and therefore not brought to our notice.

Some newly diagnosed cases of Silicosis are not included because of previous lengthy gold-mining history which could reasonably be held responsible.

There have also been a few cases of workers developing pulmonary tuberculosis without Silicosis or Asbestosis, but their number does not suggest any particular hazard at Wittenoom, other than that associated with mining in general.

Five Mill workers have been diagnosed as suffering from Asbestosis since 1958 and one under ground worker. Their average

4. C^{∞} 光滑函数

100. 7.14x

Periodical chest x-ray examination of workers in the Asbestos industry during 1959 disclosed no new cases of Asbestosis, although there are several men whose x-rays must be considered suspect. Those whose x-rays are considered suspicious of Asbestosis will be examined again in 1960.

There are a number of puzzling and disquieting features. In several instances Asbestosis has been diagnosed in underground workers although the disease had been considered peculiar to the Mill. One member of the train crew underground, not usually at great dust risk, has what appears to be a mixture of silicosis, Asbestosis and possibly Tuberculosis. Another underground worker has what appears radiologically to be pure silicosis, but his sputum contains asbestos bodies.

The disquieting features about the dust counts are two: 1)

- 1) The rock mined is apparently highly silicious and therefore particularly dangerous. The dust counts are on a par with figures for the old mines. A higher standard should be set in view of the high silica content and the additional Asbestosis risk.
- 2) The dust counts are of particles only, the same instrument is used for detecting silica particles and asbestos fibres

Dr. D.D. Letham.

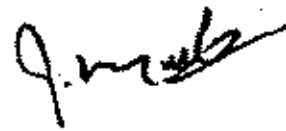
6th April, 1900.

However, without proper dust counts it is impossible to know whether new cases will not appear after a relatively short exposure, say 10-15 years. It would appear that even with the highest standards of ventilation Asbestosis is still a hazard overseas.

I could go on, but perhaps these few ideas will show you how my mind is running.

Please return the enclosures. Perhaps you could have photostats made.

Yours faithfully,



CHEST PHYSICIAN &
MINES MEDICAL OFFICER.

DISTRICT HOSPITAL

KALGOORLIE

JMcN:EI.
Ref. 1/815/59.

Date 6th April, 1960.

Dr. D.D. Letham,
Physician,
Department of Public Health,
57 Murray Street,
PERTH.

Dear Dr. Letham,

Midget-Impinger.

Enclosed are details concerning this instrument. I was keeping them in the hope that some-one would enquire and copies were sent by the General Secretary of the Chamber of Mines to the Manager, Australian Blue Asbestos and the Senior Inspector of Mines.

The present method of dealing with these matters is unsatisfactory to me because I do not know who has been consulted or not. For example, has the Under Secretary for Mines or the State Mining Engineer expressed any comments. I feel that:

- 1) the Mines Department should obtain such an instrument.
- 2) that an operator should remain at Wittenoom for a reasonable period taking regular counts underground and in the Mill.
- 3) the operator should be employed by either the Company as a ventilation officer or the Mines Department as an assistant Inspector.
- 4) the details of the dust counts should be supplied to all interested parties, including myself, giving the laboratory Number of any man working permanently in any dusty position.
- 5) the least that should be done for a worker in a dusty position, which cannot be relieved, is to rotate him regularly to a less dusty job.
- 6) Dust counts underground and in the Mill should show levels of asbestos fibres and silica particles separately (as you know some workers appear to have developed a mixture of Silicosis and Asbestosis).
- 7) It is important to stress that the short exposure which gave rise to the diagnosed cases was scandalous but that the improvements so far made may have lessened the hazard.

MINUTE for:-

THE COMMISSIONER OF PUBLIC HEALTH.

Asbestosis-Silicosis - Wittenoom.

Further of my minute of 26th February, 1960,
herewith an addendum to the report furnished by Dr. McNulty.

AK.JMcC
F.420/58
30th March, 1960.

DIRECTOR,
TUBERCULOSIS CONTROL BRANCH.

42
KALGOORLIE

23rd March, 1960.

ADDENDUM TO REPORT ON THE HEALTH OF WORKERS
IN WITTENOOM, 1959.

Information has now been obtained from Canada, through the courtesy of the General Secretary of the Chamber of Mines, confirming my impression that the Konimeter in use in the State is not an effective instrument for dust counting in the Asbestos industry.

In the Quebec Asbestos industry a Midget-Impinger is used. It is stressed that the fibres over 10 microns in length are of particular importance and whilst the total dust concentration should be below 10 million particles per cubic foot of air, the maximum fibre count, i.e. over 10 microns in length, permitted is 1 million fibres per cubic foot of air.

I have fuller details if required and I understand that copies have been sent to the Senior Inspector of Mines, Kalgoorlie, and the Manager, Australian Blue Asbestos, Wittenoom.

J. McNulty

CHEST PHYSICIAN and
MINES MEDICAL OFFICER.

Certain experts claim that there is little, if any progression in Asbestosis when exposure to dust ceases, in contrast to Silicosis which, undoubtedly, can progress. It is hard to believe that the disease process is arrested if no further dust is inhaled, but once again it is too early to draw any conclusion for the cases diagnosed in this State.

There is statistical evidence to suggest that exposure to asbestos dust may cause lung cancer. The matter is controversial but lung cancer certainly appears to be more common in workers exposed to asbestos dust than comparably employed workers in other industries.

I forwarded a detailed report on the health of workers at Pittsboro to the Public Health Department in January, 1960. Dr. Lotham, Physician, Public Health Department has a copy, and it would be worthwhile discussing it with him. He is also familiar with the general problem.

Finally, I am re-assured by your last sentence that your enquiry is purely exploratory and you have no definite purpose in mind. In the event of my being consulted, prior to amending the Workers' Compensation Act, I would inquire into the subject more closely.

Yours faithfully,

CHIEF PHYSICIAN and
STATE MEDICAL OFFICER.

P.S. The delay in answering your letter was caused by my absence on leave.

Dr. A. King.



DISTRICT HOSPITAL

KALGOORLIE

JMcH:RI.

Date 17th March, 1960.

The General Manager,
State Government Insurance Office,
184 St. George's Terrace,
PERTH.



Dear Sir,

Asbestosis.

Too few cases of Asbestosis have been diagnosed and the time of observation has been too short, to reply adequately to your request for information. There are many references to the problem in the World literature but the conclusions drawn are often vague and, occasionally, contradictory.

Insofar as the cases diagnosed in this State are concerned, the main difference between Asbestosis and Silicosis lies in the length of exposure to dust. It is rare nowadays to diagnose Silicosis in a gold miner with less than ten years mining, new cases diagnosed have an average of 15 to 20 years. Asbestosis has been diagnosed in six workers at Wittenoom and their average exposure to asbestos dust was approximately four years. All of these workers appear to have contracted the disease in the old mill, which is not now in use, and it is too early to assess the effect of the improved conditions of the new mill. However, a few underground workers have contracted a chest disease which appears to be a mixture of Silicosis and Asbestosis.

The amendment to the Mine Workers' Relief Act was necessary because otherwise workers disabled from Asbestosis would have been excluded from benefits. Since the broad term Pneumoconiosis in the Workers' Compensation Act includes Asbestosis there does not seem to be any need to specifically mention it unless benefit was to be effected in a different way. It is hoped that further investigation at Wittenoom will reduce the dust hazard to at least par with that existing in the gold-mining industry. If this cannot be assured then the brief exposure to asbestos dust required and the extent of disease so far noted might make it necessary to compensate and presumably insure workers exposed to this dust on a different scale to gold miners.

COPY

1105/43
Minister's Office,
Mines Department,
PERTH.

17th March, 1960.

Hon. Chief Secretary,
Chief Secretary's Department,
PERTH.

Dear Mr. Hutchinson,

Your letter of the 4th instant concerning industrial health in the mining industry is acknowledged.

I am very aware and extremely grateful for the work which has been undertaken by your Department in the mining industry generally, in respect to silicosis. The figures on Wittenoom are indeed very disquieting.

In the Department of Mines our officers are very conscious of dust nuisance and every possible precaution is taken to minimize the incidence of dust by the provision of adequate ventilation.

In this regard our mines inspectors maintain constant vigilance, and we have special ventilation inspectors.

The asbestos industry is relatively new in Western Australia, production having taken place only over the past 10 years or so, and no doubt the industry is still "learning", but as you say, better methods of ventilation are being adopted.

I do not quite understand the Commissioner for Public Health's statement that his responsibility is not clearly and unequivocally laid down in the Mining Act. However, the responsibilities of the Minister for Mines and the Mines Department are clearly and unequivocally laid down in the Mining Act.

I have no objection to the conference suggested by you taking place between officers of both Departments, in fact I think it is a good idea.

Yours sincerely,

(s/s) Arthur Griffith
MINISTER FOR MINES.

7
FILE
24 MAR 1960

6/16/48

COPY ONLY.

File 1126-48



4th March, 1960.

Hon. Minister for Mines,
Mines Department,
PERTH.

As you are aware, this Department has developed a branch of Industrial Health, progressively in the care of Dr. Letham who is responsible to the Commissioner of Public Health.

In addition, all gold and asbestos miners have periodical x-ray examinations of the chest conducted by the Tuberculosis Control Branch, the films being reviewed by Dr. McNulty in Kalgoorlie who collaborates with Dr. Letham in this work in its industrial health aspects.

For a considerable number of years, the Commissioner of Public Health has been concerned with the hazard to workers at the Blue Asbestos Mine in Wittenoom, both to those working underground and those on the surface in association with the mill. A further survey of these workers was carried out last year and the results have now been analysed by Dr. McNulty. A copy of his report is attached.

As will be seen, the predictions of Medical Officers in this Department that the hazard at Wittenoom would produce cases of asbestosis and silicosis have been shown to have been well founded. Dr. McNulty's report is disquieting.

The Commissioner for Public Health informs me that his responsibility for the health of mine workers is not clearly and unequivocally laid down in mining legislation. This is a matter for considerable concern to me and I am proposing that this matter be taken up between the Commissioner of Public Health and officers of your department in order that the position may be clarified. I would welcome your views.

COPY ONLY.

C.P.H.

I have read the attached, and the position certainly does appear serious. I will await your memo, and then follow the procedure suggested in forwarding the various reports on to the Hon. Minister for Mines.

(Sgd) R.H.

COPY ONLY.

MINUTE for:

THE COMMISSIONER OF PUBLIC HEALTH.

Asbestosis-Silicosis - Wittenoom.

Attached is a rather disquieting report in regard to the incidence of asbestosis and silicosis at Wittenoom Gorge.

I think the report produces further evidence as to the necessity of the appointment of a further Medical Officer to assist Dr. McNulty at Kalgoorlie Chest Clinic in the supervision of miners in Kalgoorlie and the rest of the State.

As Dr. McNulty has pointed out, there is much to be done in regard to the prevention of industrial chest disease and there will have to be a build up in the liaison of the medical and engineering aspects of the problem.

Dr. McNulty has submitted another report in relation to tuberculosis and silicosis in gold miners which will be incorporated in my Annual Report for 1959.

However, I think the position in regard to Wittenoom is so important that I suggest a copy of Dr. McNulty's report be forwarded to the Under Secretary of Mines and the State X-Ray Medical Engineer for discussion with the Minister for Mines if this is considered necessary.

In previous reports to you I have emphasized the importance of Silicosis and Tuberculosis in Gold Miners. I feel we should take more steps to alleviate the position in regard to Industrial Dust Hazards to workers; rather than apparently being more concerned with payment and eligibility of compensation when the damage is done to the health of the individual.

AK.JMcC
26th February, 1960.

(Sgd) A.X.
DIRECTOR,
TUBERCULOSIS CONTROL BRANCH.

In recent years it would be unusual to diagnose Silicosis in a gold miner with less than 10 years exposure. For example, in 1958 there were no new cases of Silicosis in the 0-10 year group, 20 cases in the 10-20 year group and 29 cases in the 20-30 year group. Expressed as a percentage of the total number of mine workers, this gives an annual incidence of Silicosis of approximately 1 per cent. percentage incidences. These are not very accurate and are not really comparable, but they do illustrate the grave hazard which existed at Wittenoom compared with the general mining industry.

Since 1958, there have been one underground and five mill workers at Wittenoom definitely diagnosed as suffering from Asbestosis. All were advised to leave the industry but for various reasons have not done so. Five of the six were investigated in hospital. The average exposure to asbestos dust in these cases was four years only.

There are two other suspect cases and two suggesting they are affected with a combination of Silicosis and Asbestosis.

Apart from these, four others were diagnosed with Silicosis, three having had a previous history of coal mining abroad. These cases suggest that there is also an increased risk of Silicosis underground at the mine. The average exposure in these cases is 11 years (excluding previous mining). In two of these cases there is probable superadded tuberculous infection.

Some newly diagnosed cases of Silicosis are not included because of previous lengthy gold-mining history which could reasonably be held responsible.

There have also been a few cases of workers developing pulmonary tuberculosis without Silicosis or Asbestosis, but their number does not suggest any particular hazard at Wittenoom, other than that associated with mining in general.

Three workers with a mixed gold and asbestos mining history have developed silicosis and asbestosis. Four workers with a similar mining history have developed pure silicosis. Of these seven workers, the average exposure to dust including all mining was 12 years and excluding previous mining (which is not entirely justifiable) was 7 years.

Conclusion

The percentages quoted above (i.e., 12 per cent. of asbestos workers suffering from industrial chest disease with over 4 years exposure compared with 1 per cent. of gold miners with over 10 years exposure) are crude and probably paint too black a picture of the conditions which existed. With a shifting working population, it is almost impossible to work out accurate incidences. However, the very high labour turnover at Wittenoom is necessarily associated with a short average exposure per worker and many workers at risk were protected simply because their exposure time was too short. At least one of these short-term workers has been diagnosed as suffering from Asbestosis, many years after he left the industry.

The problem is essentially one of ventilation conducted with a proper appreciation of the relative importance and medical significance of the asbestos fibre as distinct from the silica particle. Despite the many marked improvements which have been effected at the Mine and Mill, I am not satisfied that the risk of industrial chest disease has been eradicated or even brought to par with the risk of Silicosis in the gold-mining industry. The prevention of industrial chest disease is a medico-engineering problem and requires close liaison between the Mines Department, who are responsible for ventilation and dust counts, and the medical officers who are responsible for the periodical clinical and chest X-ray examinations.

J. McNULTY, M.B., Ch.B., B.A.O.,
Chest Physician.

entered the industry developed silicosis with an annual incidence of 10 per thousand. It is not possible to determine what percentage of silicosis, recorded, subsequently appear in the last column as having developed tuberculosis. A frequent criticism made to account for the variation in the number of new cases of silicosis diagnosed annually and the continued high rate is that the diagnostic criteria vary. There is some truth in this criticism. With minimal radiological silicosis a subjective error is present but this usually only results in anticipating or delaying the diagnosis for a few years and the effect is cancelled out. Chest X-rays dating back to 1936 and clinical record cards containing the diagnoses made at the time are available and reappraisal of the films does not suggest that the diagnostic standards have varied greatly. Improved X-ray technique, high definition screens, dual film reading and comparison with standard films from the Pneumoconiosis Research Council are probably enabling a diagnosis to be made at a slightly earlier stage than hitherto and this is most desirable. If the diagnosis is in doubt, complete investigative facilities, including lung function tests, are available at the Perth Chest Hospital and ever increasing use is being made of these facilities.

Statistical analysis of the results is most difficult, if not impossible, because miners and ex-miners are examined under several different Acts and because of the large number of itinerant and casual short-term workers in the industry. Australian Blue Asbestos at Wittenoom which has been in full production for a relatively short time presents a different problem and has been the subject of a special report.

A report on the health of miners would not be complete without introducing the question of the miners general susceptibility to respiratory infections, particularly chronic bronchitis. It is extremely difficult to apportion pulmonary disability between silicosis and chronic bronchitis. Chronic bronchitis almost invariably accompanies silicosis but occurs equally commonly without any evidence, whatever, of silicosis. It is a disease associated with heavy industry and air pollution of which silica dust forms only a part. Dust, fumes, artificial working conditions, lack of sunlight, changes in temperature and humidity, cigarettes, alcohol, all contribute. The system of ventilation, which at times direct a stream of cold air on a man perspiring from over exertion, may also contribute. At the pre-entry medical examination all applicants for initial medical certificates with evidence of bronchitis are excluded and miners who develop suggestive symptoms are strongly advised to leave the industry. Intensive research is being conducted in England into this particular problem and further developments will depend on the outcome.

INDUSTRIAL CHEST DISEASE II.—WITTENOOM

Periodical chest X-ray examination of workers in the Asbestos industry during 1959 disclosed no new cases of Asbestosis, although there are several men whose X-rays must be considered suspect. Those whose X-rays are considered suspicious of Asbestosis will be examined again in 1960.

The length of exposure of workers contracting Asbestosis or Silicosis is much shorter than comparably employed men in the gold-mining industry and the extent of disease is greater. The small numbers of workers and the extremely high labour turnover make this less obvious.

There are a number of puzzling and disquieting features. In several instances Asbestosis has been diagnosed in underground workers although the disease had been considered peculiar to the Mill. One member of the train crew underground, not usually a great dust risk, has what appears to be a mixture of silicosis, asbestosis and possibly tuberculosis. Another underground worker has what appears radiologically to be pure silicosis, but his sputum contains asbestos bodies.

The Mines Department has permitted me to inspect the results of their periodical dust counts. It is obvious that the new Mill is a great improvement on the old Mill and that conditions underground have also improved. It is too early to tell whether the new Mill will be responsible for fresh cases of industrial chest diseases or not.

The disquieting feature about the dust counts are two fold :—

- (1) The rock mined is apparently highly silicious and therefore particularly dangerous. The dust counts are on a par with the figures for the gold mines. A higher standard should be set in view of the high silica content and the additional Asbestosis risk.
- (2) The dust counts are of particles only ; the same instrument is used for detecting silica particles and asbestos fibres. The dangerous particle size in Silicosis is less than 5 microns ; in Asbestosis the dangerous fibre length is between 20 and 40 microns. The dust counts therefore are of little value unless they show the number of fibres per cc within that range. The Konimeter in use in this State is not regarded as an effective instrument for dust counting in the Asbestos industry in Canada. A midget-impinger is used. It is stressed that fibres over 10 microns in length are of particular importance and whilst the total dust concentration should be below 10 million particles per cubic foot of air, the maximum fibre count (i.e., over 10 microns in length) permitted, is 1 million fibres per cubic foot of air.

Many workers remain at Wittenoom for less than one year and less than 50 per cent. of the work force, at any one time, have been continuously employed for more than four years. A very rough estimate of the percentage of workers, with over four years exposure and suffering from industrial chest disease is 12 per cent. (estimated by expressing the number of workers, detailed below, as a percentage of the number of workers examined in 1959 whose initial mining certificate was issued prior to 1955).

Memorandum:

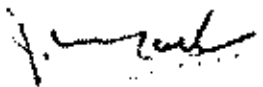
Dr. A. King

13th January, 1960.

Conclusion.

The percentages quoted above (i.e. 12% of asbestos workers suffering from industrial chest disease with over 4 years exposure compared with 1% of gold miners with over 10 years exposure) are crude and probably paint too black a picture of the conditions which existed. With a shifting working population it is almost impossible to work out accurate incidences. However, the very high labour turnover at Wittenoom is necessarily associated with a short average exposure per worker and many workers at risk were protected simply because their exposure time was too short. At least one of these short-term workers has been diagnosed as suffering from Asbestosis many years after he left the industry.

The problem is essentially one of ventilation conducted with a proper appreciation of the relative importance and medical significance of the asbestos fibre as distinct from the silica particle. Despite the many marked improvements which have been effected at the Mine and Mill, I am not satisfied that the risk of industrial chest disease has been eradicated or even brought to par with the risk of silicosis in the gold mining industry. The prevention of industrial chest disease is a medico-engineering problem and requires close liason between the Mines Department, who are responsible for ventilation and dust counts, and the medical officers, who are responsible for the periodical clinical and chest x-ray examinations.


CHEST PHYSICIAN and
MINES MEDICAL OFFICER.

Memorandum:-

Dr. A. King.

13th January, 1960.

- 5 -

Case: Mining History:

Diagnosis:

Comment:

N. 4 yrs. coal mining
Holland.
6 years U/G. A.B.A.

Silicosis

Extensive silicotic nodulation with definite
annual progression. Has been admitted to
Perth Chest Hospital for investigation.

These cases suggest that there is an increased risk of silicosis
underground at A.B.A. and that Asbestosis is also a hazard. Further, there are several
workers in whom it is not possible to be certain which disease they are suffering
from and some evidence to suggest that they are suffering from both. Excluding
G & H the average exposure (including all previous mining) is 11 years and excluding
all previous mining (which is not quite fair) 8 years.

O. 14 years mixed
gold mining.
9 years A.B.A. (Rigger)

?

Had a recent pneumonia which has resolved
completely. Chest x-ray now reasonably
normal. Sputum contains asbestos bodies.
Feels very well for age (65) and denies
symptoms of industrial chest disease.

andum -

- 4 -

. King

13th January, 1960

Mining History: Diagnosis:

Comment:

15 years gold mining U/G.
5 years U/G. A.B.A.

Has definite radiological abnormality, more suggestive of Silicosis than Asbestosis. Sputum contains asbestos bodies. Denies symptoms and is unwilling to accept further investigation in hospital. For further examination at P.C.C. in February, 1960 when it is hoped to make a definitive diagnosis.

Draughtsman A.B.A.
12 years

Definite radiological changes indistinguishable from Asbestosis but has a clinical history suggestive of bronchiectasis. Occupation not usually associated with dust hazard but apparently worked in the old Mill under very dusty conditions

5 years U/G. gold
mining.
1 year U/G. A.B.A.
11½ years Mill A.B.A.

Silicosis &
Asbestosis.

Radiologically more like Silicosis than Asbestosis. Sputum containing asbestos bodies. Investigated R.G.H. in 1958.

7 years U/G. gold
mining.
1 year surface gold
mines.
7 years U/G. A.B.A.

Silicosis &
Asbestosis

Sputum contains asbestos bodies. Investigated R.G.H. in 1958. Radiologically more like Silicosis than Asbestosis and the changes are extensive.

Coal mining Germany 2½ yrs. Silicosis.
U/G. A.B.A. 5½ years.

Diagnosed active Silico-T.B. Extensive lung changes due to Silicosis.

2½ yrs. coal mining -
Holland.
7 years U/G. A.B.A.

Minimal x-ray evidence without disability.
Has left industry.

Radial driller England
20 years.
½ year U/G. A.B.A.
5 years Mill A.B.A.

Minimal radiological evidence of silicosis. Radial drilling not associated (as far as I ascertain) with risk of Silicosis. No definite disability.

Memorandum:

Dr. King,

13th January, 1960.

- 2) The dust counts are of particles only, the same instrument is used for detecting silica particles and asbestos fibres. The dangerous particle size in Silicosis is less than 5 microns, in Asbestosis the dangerous fibre length is between 20 and 40 microns. The dust counts are therefore of little value unless they show the number of fibres per cc within that range. I do not know whether there is an accepted national minimum fibre count for asbestos dust, either in England or America but it seems wrong that two completely different dust hazards should be estimated in the same way.

Many workers remain at Wittenoom for less than one year and less than 50% of the work force, at any one time, have been continuously employed for more than four years. A very rough estimate of the percentage of workers, with over 4 years exposure and suffering from industrial chest disease, is 12% (estimated by expressing the number of workers, detailed below, as a percentage of the number of workers examined in 1959 whose initial mining certificate was issued prior to 1955).

In recent years it would be unusual to diagnose Silicosis in a gold miner with less than 10 years exposure. E.g. in 1958, there were no new cases of Silicosis in the 0-10 year group, 20 cases in the 10-20 year group and 29 cases in the 20-30 year group. Expressed as a percentage of the total number of mine workers this gives an annual incidence of Silicosis of approximately 1%. These percentage incidences are not very accurate and are not really comparable, but they do illustrate the grave hazard which existed at Wittenoom compared with the general mining industry.

The following are the particulars of cases of industrial disease detected at Wittenoom since 1958. The list is complete as far as our records go, but there may be a few cases diagnosed elsewhere who were not examined under either of the relevant Mining Acts and therefore not brought to our notice.

Some newly diagnosed cases of Silicosis are not included because of previous lengthy gold-mining history which could reasonably be held responsible.

There have also been a few cases of workers developing pulmonary tuberculosis without Silicosis or Asbestosis, but their number does not suggest any particular hazard at Wittenoom, other than that associated with mining in general.

Memorandum:-

- 3 -

Dr. A. King

13th January, 1960.

Case: Mining History. Diagnosis: Comment:

- | | | | |
|----|--|------------|--|
| A. | 3 1/2 years Mill A.B.A.
1 year u/g. A.B.A. | Asbestosis | Ceased work at A.B.A. on 8/10/54.
Diagnosed Asbestosis following pneumonia
in 1958 when he had severe pulmonary
disability and persistent asbestos bodies
in his sputum. |
| B. | 4 years underground
A.B.A. (Scraper Driver) | Asbestosis | Diagnosed active pulmonary T.B. in 1957
with +ve sputum. Resected lobe showed
histological evidence of Asbestosis. |
| C. | 6 years Mill A.B.A. | Asbestosis | Radiological evidence of extensive
Asbestosis. Asbestos bodies never
found in sputum. Has definite
disability. |
| D. | 4 years crushing plant -
gold mines.
4 years Mill A.B.A. | Asbestosis | Extensive radiological lung changes
with possible Pulmonary Tuberculosis.
Admitted Perth Chest Hospital. Denies
much disability. |
| E. | 3 years Mill A.B.A. | Asbestosis | Extensive radiological changes. Denies
symptoms or disability. Asbestos bodies
not found in sputum. |
| F. | 5 years mixed gold-
mining.
15 years Mill A.B.A. | Asbestosis | Radiological evidence of Asbestosis.
Had definite disability and has been
admitted to Perth Chest Hospital for
further investigation. |

These represent the men definitely diagnosed as suffering from Asbestosis. All were advised to leave the industry, but for various reasons several cannot do so. Five out of the six have been investigated in hospital. The exception (E), shows radiological improvement since 1958 and has been given a job with a relatively low dust hazard. It is easily seen that, excluding F, the average exposure to asbestos dust was four years only.

DISTRICT HOSPITAL

Kalgoorlie

JMcN:EL.

Date 13th January, 1960.

MEMORANDUM:

Dr. A. King,
The Director,
Tuberculosis Control Branch,
17 Murray Street,
PERTH.

Periodical chest x-ray examination of workers at the Australian Blue Asbestos in 1959 disclosed no new cases of Asbestosis, although there are several men whose x-rays must be considered suspect. Those whose x-rays are considered suspicious of Asbestosis will be examined again in 1960.

The length of exposure of workers contracting Asbestosis or Silicosis is much shorter than comparably employed men in the gold-mining industry and the extent of disease is greater. The small number of workers and the extremely high labour turnover make this less obvious.

There are a number of puzzling and disquieting features. In several instances Asbestosis has been diagnosed in underground workers although the disease had been considered peculiar to the Mill. One member of the train crew underground, not usually at great dust risk, has what appears to be a mixture of Silicosis, Asbestosis and possibly Tuberculosis. An ex-underground shift boss, now an underground supervisor, has an abnormal chest x-ray and asbestos bodies in his sputum.

The Mines Department has permitted me to inspect the results of their periodical dust counts. It is obvious that the new Mill is a great improvement on the old Mill and that conditions underground have also improved. It is too early to tell whether the new Mill will be responsible for fresh cases of industrial chest diseases or not.

The disquieting features about the dust counts are two fold:-

- 1) The rock mined is apparently highly silicious and therefore particularly dangerous. The dust counts are on a par with the figures for the gold mines. Should they not have a much higher standard to aim at in view of the dangerously high silica content and the additional asbestos risk?

DISTRICT HOSPITAL

KALGOORLIE.

JMcN/PR:

Date 30th September, 1958.

Dr. A. King,
Director,
Perth Chest Clinic,
17 Murray Street,
PERTH.....W.A.

Dear Dr. King,

Don informs me that you wish an estimate of the incidence of asbestosis in the industry.

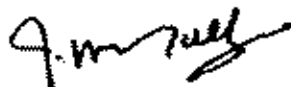
Your recent answer to questions in the Legislative Assembly contains all the information available; ie.

5 out of 254 workers were diagnosed as suffering from Asbestosis or roughly .5% in an X-ray survey which included all the workers at Wittenoom.

All the workers in the Asbestos industry will be X-rayed again early in 1959 and it should be possible to gain a more reliable indication of the incidence of Asbestosis.

If the Mine Workers' Relief Act is amended I will re-classify, after a clinical examination, the previously diagnosed cases.

Yours sincerely,



J. McNulty.

CHEST PHYSICIAN.



Copy sent to Dr. King

F. 2/10

DBL:JMcC

Air Mail

14th July, 1958.

Dr. D. Macqueen,
WITTENOOM.

Dear Dr. Macqueen,

Just before I left Wittenoom, the wife of this patient approached me and asked me about this man's chest x-rays. I told her I would review them and if I had anything pertinent to write I should contact you.

I am hoping to review his recent films and some at the Chest Clinic with Dr. McNulty in the near future. He, I hope, will send down the films from Kalgoorlie District Hospital. After we have seen them together I shall write to you again.

Yours truly,

ASSISTANT
TUBERCULOSIS PHYSICIAN.

DDL:jmcC

Air Mail

14th July, 1958.

Dr. D. Macqueen,
WITTEBOM.

Dear Dr. Macqueen,

You will recall that we saw this man's x-ray together and that, in addition to bilateral nodulation typical of silicosis, he had a mass in the right lower zone.

I would appreciate it if you would repeat a 17" x 14" film and send it down to me with a minimum of delay.

I expect to be able to see all his films with Dr. McNulty when he comes down from Kalgoorlie in a week's time.

Yours truly,

ASSISTANT
TUBERCULOSIS PHYSICIAN.

DDL:JMcC

14th July, 1958.

Dr. J. McNulty,
Chest Physician,
District Hospital,
KALGOORLIE.

Dear Jim,

By now I hope you have got over the initial shock of my request for 49 sets of films. I would like to add one more - that of 42061.

I have asked Dr. Macqueen to take another x-ray following the one taken at Wittenoom two weeks ago.

There is, in addition to typical silicotic nodules throughout the lung fields, a mass at the right base which is more than just an accentuation of broncho-vascular markings.

The films of which I have asked you to send down so that we can review them together, are particularly interesting. In addition to haziness at both bases, nodules are apparent in both upper zones and he has a large mass in the right upper to mid zone. Dr. Macqueen told me that a biopsy of this mass was taken at Hollywood. This revealed carcinoma of the lung and silicosis. Even if asbestosis were absent, I do feel that a biopsy in either lower lobe, would indicate its presence.

I do hope that you can manage to send the majority of these films down. It will be a golden opportunity to read them together on your way to or from Melbourne. Indeed, if it suits you better, we could make it a day before a day on your way to Melbourne and a day on your way back.

I think that between us we could well plan a survey of the asbestos industry in Western Australia and Wittenoom is an obvious starting point.

Yours sincerely,

ASSISTANT
TUBERCULOSIS PHYSICIAN.

64

924

DISTRICT HOSPITAL

KALGOORLIE.

Believe
JMcN/PR:

Date 9th July, 1958.

Dr. D.D. Letham,
Assistant Tuberculosis Physician,
Perth Chest Clinic,
17 Murray Street,
PERTH.....W.A.

Dear Don,

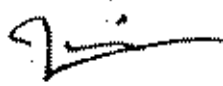
Already we have found three definite cases of Asbestosis and still quite a few cases unreviewed.

I will travel down by train arriving Perth Friday morning 18th July and seek you at the Clinic say about 10 a.m. (After Breakfast.) We will be able to spend as much time as you wish.

Will you please send up your list of suspect films so that I can be sure to bring them to Perth. Mark the envelope 'Not to be opened' and I won't touch it until our review is complete. I don't anticipate much disagreement anyway.

I will forward our X-rays by ordinary mail in plenty of time and bring our records with me.

Kind regards,


J. McNulty.
CHEST PHYSICIAN.

DDL:GC

28th April, 1958

Dr. J. McNulty,
Chest Physician,
District Hospital,
KALGOORLIE.

Dear Jim,

You will by now have received my letter regarding the patient with ? asbestosis.

I have asked Mr. Woolcott to send you up the relative references. I have both Volumes I and II of Pneumoconiosis Abstract and I shall send these to you.

Yours sincerely,

ASSISTANT
TUBERCULOSIS PHYSICIAN

DISTRICT HOSPITAL

KALGOORLIE.

JMcN/PR:

Date 22nd April, 1958.

Dr. D.D. Letham,
Assistant Tuberculosis Physician,
Perth Chest Clinic,
17 Murray Street,
PERTH.....W.A.

Dear Don,

You have been interested in a case of asbestosis in
Wooroloo which has landed in my lap now. I'd be grateful if you
would forward a few references to me.

I have also written to Mr. Woolcott, Librarian, for help.
If either of you have Volumes I and II of Pneumoconiosis Abstract,
I'd appreciate the loan of it.

W.D. McNulty
Yours faithfully,

J. McNulty
J. McNulty.
CHEST PHYSICIAN.



W.D. McNulty

COPY

ROYAL PERTH HOSPITAL

PERTH, 10th April, 1958.

Dr. L. Henzell,
Commissioner of Public Health,
Public Health Department
57 Murray Street,
PERTH, W.A.

45753

~~64406~~

Dear Dr. Henzell,

In September last year patient [redacted] was admitted at Wooroloo with tuberculosis of the right upper lobe. The previous five years he had worked at the asbestos mines in Wittenoom Gorge.

Recently thoracotomy was done and the specimen of the right upper lobe was received in my Department on the 24th March.

Apart from tuberculous lesions, asbestosis is present and severe squamous metaplasia of part of the lining of one of the bronchioles. In other words, we see in one section together the damage done by asbestosis, the complicating tuberculosis which although not as common with this form of pneumoconiosis as with silicosis, is still well known to occur and the squamous metaplasia which might be the precursor of bronchial carcinoma which is known from experience elsewhere to occur at a higher rate in asbestos workers than in a control group.

I have been informed that the working conditions in Wittenoom are appalling, and thought the matter of sufficient importance to bring to your attention. I am afraid that if no steps are made to improve the working conditions we will see in the near future a considerable amount of asbestosis with or without complicating tubercle and possibly a rise in lung cancer amongst those workers within the next ten years.

That this will involve the State in considerable expense in compensation money is self evident, and although in my opinion of less importance than the human suffering involved, might be a more important argument for the Departments concerned to do something about the matter.

Yours sincerely,

(Sgd.) R.E.J. ten SELDEN

Professor of Pathology.

GOVERNMENT OF WESTERN AUSTRALIA.

In replying please quote

812/51

Correspondents will greatly facilitate the transmission of their business by:—
Combining each letter to one subject.
Writing on one side only of the paper.

OFFICE OF THE STATE MINING ENGINEER

MINES DEPARTMENT

CENTRAL GOVERNMENT BUILDINGS

JSE/S.

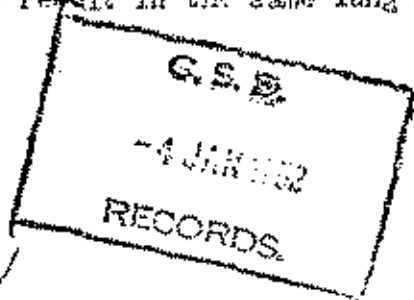
PERTH, 21st December, 1951

The Commissioner of Public Health,
PERTH.

I have to acknowledge, with thanks, receipt of your memo of the 10th instant, enclosing copy of a minute from Dr. King descriptive of asbestosis.

This minute has been carefully perused, with great interest, by our technical officers and it appears that we will have to watch this problem closely, with the assistance and co-operation of the Commonwealth Health Laboratory.

Incidentally, Dr. King refers throughout his minute to chrysotile asbestos only, which is a hydrated silicate of magnesia, whereas our greatest problem at the moment is with crocidolite, which is a silicate of iron and soda. It is, however, very similar to chrysotile in its fibrous nature and it is presumed that continued inhalation of the dust would result in the same lung condition as with chrysotile.



UNDER SECRETARY MINES.

J. King

for entry & comments of records

CFH.

** Noted*

Thank

17/1/52

18/1/52

PHD.618/48

LH/OS

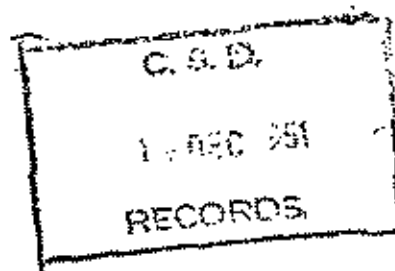
10th December, 1951.

THE UNDER SECRETARY FOR MINES.

With reference to your memorandum of the 25th October, 1951. concerning asbestosis, the enclosed comments have been prepared by Dr. Alan King, the Director of the Tuberculosis Control Branch, for your information.

LINLEY HENZELL
COMMISSIONER OF PUBLIC HEALTH

Enclos.1.



diaphragm and a felted or "porcupine" appearance at the periphery of the cardiac silhouette, the last caused by the pleuropericardial adhesions.

NB // The onset of the disease is insidious with gradual increase in cough, expectoration, dyspnea, loss of weight and, in time, inability to work. The physical examination is not revealing. Wood and Gloyne draw attention to a peculiar earthy complexion of the face and a slight, violet tinge in the cheeks and lips of some individuals. Occasionally, asbestos corns occur in the skin of the hands caused by the penetration of asbestos fibres into the superficial epidermis. It takes, on the average, ~~on the average~~, between five to ten years for asbestosis to develop, although it may occur in as short a period as two years where working conditions are bad. Whether the disease can progress after contact is broken with asbestos dust is still unsettled. Death results from tuberculous or nontuberculous infection, congestive heart disease or other intercurrent diseases. The measures listed for the prevention of silicosis apply also to asbestosis.

Ham K
DIRECTOR.
TUBERCULOSIS CONTROL BRANCH.

X Reference: 'Diseases of the Chest' - Rubin.
'Dust and its Effects on the Respiratory System' - Gill.

GE.
16.11.51.

Asbestos is a hydrated silicate of magnesium in combination with traces of iron, nickel, calcium and aluminum. The substance is mined in many parts of the world, including Canada, where most of the American supply (chrysotile) is obtained. Mined asbestos comes in long, thin, fibrous strands which can be spun or woven. Its pliable texture and high resistance to heat and chemicals make asbestos an important industrial product in the manufacture of mattresses, brake-lining, fire-proofing material, electrical insulation, in jacketing boilers and steam pipes, and in a variety of building fixtures. Although the dust hazard associated with the asbestos industry does not nearly compare in prevalence with that of the silica industry, the rapid growth of the former puts asbestosis among the important forms of dust diseases.

Inhaled asbestos fibres range in size from 10 to 200 microns or more. The dust given off from asbestos during industrial operations consists mostly of small fragments of fibres from 1 to 10 microns long and under 2 microns diameter, together with longer pieces up to 50 or 60 microns, and particles 0.5 to 0.75 microns diameter. The action on the lungs is mechanical rather than chemical. The large particles, unable to enter the alveoli, lodge in the lumen and obstruct the respiratory bronchioles. Atelectasis of the distal alveoli is followed by a fibrotic reaction in the collapsed tissue. Nonobstructed alveoli undergo compensatory emphysema. Contrary to that seen in silicosis, there is practically no nodulation unless silica is mixed with the asbestos dust. The hilar lymph nodes are not much enlarged for the reason that the lymphatics are not actively engaged in the pathologic process.

The gross appearance of the lung is characterized by scattered areas of diffuse fibrosis, affecting chiefly the lower lobes, emphysema of the uninvolved parts and intense pleuritis. Depending on the extent of coexisting anthracosis and silicosis, there are associated changes and pigmentation of the lungs and lymph nodes. Infection with pyogenic organisms and tubercle bacilli modify the pathology. Tuberculosis has been found in about one-third of the autopsied cases, but there is some doubt as to whether asbestosis per se favors the development of tuberculosis, or whether vulnerability to tuberculosis is primarily due to poor working conditions and incidental factors.

A striking feature of the pathology is the presence of "asbestos bodies" seen on histologic examination of lung tissue. These golden yellow or brown bodies have been shown by Gloyne to be composed of a central core of asbestos fibres, covered by a layer of iron-containing material which is believed to be derived from blood pigment of the tissues. Asbestos bodies may be found in the sputum of asbestos workers, but their presence does not necessarily indicate lung disease. They vary considerably in shape, and are from 24 to 60 microns long and 12 to 24 microns diameter, golden-yellow in colour.

NB. The roentgen appearance of early asbestosis is not revealing. Advanced disease often shows distinguishing characteristics. The fine pulmonary fibrosis, patchy areas of interspersed emphysema and overlying pleuritis are reflected roentgenologically in a "ground-glass" appearance of a uniform quality in places showing denser opacities which, however, seldom assume the lower portions of the lungs

TPT /CJ.

COMMONWEALTH OF AUSTRALIA

DEPARTMENT OF HEALTH

TELEPHONE: KALG. 173

COMMONWEALTH HEALTH LABORATORY

KALGOORLIE

IN REPLY PLEASE QUOTE

45/1

30th. October, 1951.

Dr. A. King,
Tuberculosis Control Branch,
17 Murray Street,
PERTH. W. A.

Dear Dr. King,

Your Reference PHD. 618/48.
Australian Blue Asbestos Mine.

No miner was diagnosed as silicotic following the visit of the Mobile Laboratory in July, 1951.

There were nine cases diagnosed as F plus - All these had been so diagnosed before commencing work at Wittenoom - they had all been some time in the industry in other localities, except an engineer.

This man, who had been longest on the mine - had been some five years acting as engineer and supervisor. The increased marking in this case may well have a cardiac basis.

The next longest period was another engineer, who had been some two years - three had been only twelve months and two others about twenty months. It does not appear that any of these men show increased markings as a result of asbestosis.

Yours faithfully,

J. P. Tigue
(T.P. Tigue).
MEDICAL OFFICER.

S. S. D.

Through

(S.S. Alexander).
MEDICAL OFFICER-IN-CHARGE.

Dr King. Please see p 48 & discuss with me.

PHD.618/48
Your Ref:818/51

WSD/03

26th October, 1951.

THE UNDER SECRETARY FOR MINES.

With reference to your memorandum of the 27th September, 1951.

In the 'Tabulation of Dust Counts' from Wittenoom forwarded under your memo. of 21st September, it is assumed that the counts refer to p.p. c.c. The upper permissible limit of asbestos dust for a working atmosphere is 176 p.p.c.c. It will be noted that many of the counts are far in excess of this.

The method of count is unknown and although there is no known really satisfactory method it is highly probable that the one used excluded many long fibres from the count because of their reluctance to enter a machine of the Watson Konimeter type.

Unlike normal silicosis where small particles are the danger the main hazard in asbestosis is from the longer fibres and these will probably be in excess of anything indicated in the counts.

Asbestosis produces more rapid fibrosis of the lung than silicosis and is more liable to superimposed infection. It is therefore apparent on the data submitted that conditions are far from satisfactory and in the interest of the health of the workers, this Department must investigate the matter further and press for immediate improvement of supervision and working conditions at Wittenoom.

*Director
F.R. [unclear]
For information*

LINLEY HENZELL
COMMISSIONER OF PUBLIC HEALTH

4/12 2/59

GOVERNMENT OF WESTERN AUSTRALIA.

M.O. 13
In replying please quote

Correspondents will greatly facilitate
the transaction of their business by:
Confining each letter to one subject.
Writing on one side only of the paper.

MINES DEPARTMENT,
CENTRAL GOVERNMENT BUILDINGS,

AHT/VD

816/51

PERTH.....25th October, 1951.

COMMISSIONER OF PUBLIC HEALTH:

7P4
I shall be glad of a reply to my memo. of the
27th ultimo, wherein I asked that if available you might
supply this Department with any information you have on the
asbestosis hazard.



UNDER SECRETARY MINES



See P-59.

Our Ref. PHD. 618/48.
AK. GE.

CIV. A.

10/10/51

RECORDS

15th October, 1951.

Dr. S. S. Alexander,
Medical Officer-in-Charge,
Commonwealth Health Laboratory,
KALGOORLIE. W.A.

Dear Dr. Alexander,

Your File 45/1, Report 51/95.
Australian Blue Asbestos Mine.

The Department of Public Health is particularly interested in the possible development of asbestosis in the above miners. Dr. Hensell has requested me to write to you to see if it is possible for me to see the x-ray films of the asbestos miners who show any departure from the normal in the way of any developing asbestosis or silicosis.

Would it, therefore, be possible for you to let us borrow the films of those miners in whom a diagnosis of silicosis has been made following a previous diagnosis of a normal film and also those films in which there has been any progressive increase of silicosis?

If possible, but not essential at this stage, we would be interested in the mining history.

Yours sincerely,

DIRECTOR.

14/12

M.D. 12

In replying please quote

GOVERNMENT OF WESTERN AUSTRALIA.

Correspondents will greatly facilitate the transaction of their business by:—
Confining each letter to one subject.
Writing on one side only of the paper.

MINES DEPARTMENT,
CENTRAL GOVERNMENT BUILDINGS,

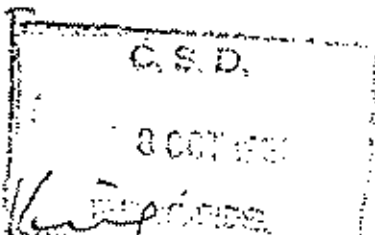
JT:JV:

PERTH, 14th October, 1951.

The Commissioner of Public Health,
Public Health Department,
Murray Street,
PERTH.



As requested by telephone, I enclose herewith copies of reports received from the Commonwealth Health Laboratory, Kalgoorlie, regarding examinations carried out at Wittenoom Gorge by this Department's Mobile X-Ray Unit.



UNDER SECRETARY FOR MINES.

Handwritten notes:
Mr King
1/10 - can please
see other documents
with me? 1/10/51

Handwritten signature: R. Laper

Handwritten notes:
1/10/51
1/10/51

COMMONWEALTH HEALTH LABORATORY, MARGOORIE.

MINE WORKERS' RELIEF ACT, 1932-1940.

RE-EXAMINEES.

Wittenoom Gorge.

3rd September, 1951.

File No. 45/1.

Australian Blue Asbestos Ltd.

Report No. 51/97.

Covering period from 1st July, 1951, to 16th July, 1951.

Present Diagnosis.	Previous Diagnosis.	Total to Report
1. Normal, etc.	Normal etc.	117.
2. Silicosis 1.	"	
3. "	Silicosis 1.	
4. Silicosis 2.	Normal, etc.	
5. "	Silicosis 1.	
6. "	Silicosis 2.	
7. Silicosis plus Tuberculosis.	Normal etc.	
8. " "	Silicosis 1.	
9. " "	Silicosis 2.	
10. Tuberculosis.	Normal, etc.	
	Total.	117.

COMMONWEALTH HEALTH LABORATORY, KALGOORLIE.

MINES REGULATION ACT, 1906.

RESULTS OF EXAMINATION -- FORTNIGHTLY REPORTS.

RE-EXAMINEES.

Wittenoom Gorge.

File No. 45/1.

3rd September, 1951.

Report No. 51/96.

Covering period from 1st July, 1951, to 16th July, 1951.

DIAGNOSIS.	Total this Report.
1. Normal	25
2. Pneumoconiosis (Increased Fibrosis).	2
3. Miner's Phthisis Early (Silicosis 1)	
4. Miner's Phthisis Advanced (Silicosis 2)	
5. Query Tuberculosis.	
6. Tuberculosis.	
7. Pneumoconiosis plus Query Tuberculosis.	
8. Pneumoconiosis plus Tuberculosis.	
9. Miner's Phthisis Early Plus Query Tuberculosis.	1
10. Miner's Phthisis Early plus Tuberculosis.	
11. Miner's Phthisis Advanced plus Query Tuberculosis.	
12. Miner's Phthisis Advanced plus Tuberculosis.	
13. Other conditions.	2
Totals.	30

COPY.

COMMONWEALTH HEALTH LABORATORY.

KALGOORLIE.

Kalgoorlie.
3rd September, 1951

Mines Regulation Act.

Re-examinees.

Addendum Report No. 51/96.

Details of cases who were re-examined under the
Mines Regulation Act, and refused Initial Certificates.

Pneumoconiosis.

Form 9.	36973	Nightingale	C.	Wittenoom.
" 9.	37033	Millington	F.	"

Silicosis Early plus Query Tuberculosis.

Form 9.	28318	Reid	R.	Wittenoom.
---------	-------	------	----	------------

"Other Conditions"

Form 9.	36814	Snow	P.	Wittenoom.
Reject 4.	9647	Walsh	G.L.	"

The above whose names are underlined received
as before the special certificate Form "9".

(sgd.) S.S. Alexander.
MEDICAL OFFICER-IN-CHARGE.

Deputy Director,
Commonwealth Department of Health,
WESTERN AUSTRALIA.

COMMONWEALTH HEALTH LABORATORY, KALGOORLIE.

MINES REGULATION ACT, 1946.

RESULTS OF EXAMINATION -- FORTNIGHTLY REPORTS.
NEW APPLICANTS

Wittenoom Gorge.

3rd September, 1951.

File No. 45/1

Report No. 51/95.

Covering period from 1st July, 1951. to 16th July, 1951.

Diagnosis.	Total this Report.
1. Normal.	62
2. Pneumoconiosis (Increased Fibrosis)	1
3. Miner's Phthisis Early (Silicosis 1)	
4. Miner's Phthisis Advanced (Silicosis 2)	
5. Query Tuberculosis.	
6. Tuberculosis.	
7. Pneumoconiosis plus Query Tuberculosis.	
8. Pneumoconiosis plus Tuberculosis.	
9. Miner's Phthisis Early plus Query Tuberculosis.	
10. Miner's Phthisis Early plus Tuberculosis.	
11. Miner's Phthisis Advanced plus Query Tuberculosis.	
12. Miner's Phthisis Advanced plus Tuberculosis.	
13. Other Conditions	5
Totals.	68

COPY.

COMMONWEALTH HEALTH LABORATORY.

KALGOORLIE.

Kalgoorlie.

3rd September, 19:

Mines Regulation Act.

NEW APPLICANTS.

Addendum Report No. 51/95.

Details of cases who were refused Initial Certificates under Mines Regulation Act.

Pneumoconiosis.

Reject 4.	41384	Martindale	T.	Wittenoom.
-----------	-------	------------	----	------------

"Other Conditions"

Reject 4.	41385	Nai	M.	Wittenoom.
" 4.	41386	Albert	F.	"
" 4.	41390	Walker	T.J.	"
" 4.	41402	Szenraj	M.	"
" 4.	41440	Cappa	J.J.	"

(sgd.) S.S. Alexander.
MEDICAL OFFICER-IN-CHARGE.

The Deputy Director,
Commonwealth Department of Health,
WESTERN AUSTRALIA.

4/12

GOVERNMENT OF WESTERN AUSTRALIA.

M.D. 17
In replying please quote

Correspondents will greatly facilitate the transaction of their business by:
Confining each letter to one subject.
Writing on one side only of the paper.

MINES DEPARTMENT,
CENTRAL GOVERNMENT BUILDINGS.

PERTH.



COMMISSIONER OF PUBLIC HEALTH:

Further to my memo. of the 21st instant in regard to blue asbestos deposits, I would suggest that you might make available to this Department any information you may have on the asbestosis hazard, which you state is greater than that of silicosis.

This Department's technical officers think that such hazard at Wittenoom would exist rather in the mill than underground, where all boring is done in siliceous rock rather than in the asbestos itself, and where very little fibrous material was found on the micro-slides.

per P-55

UNDER SECRETARY FOR MINES

45

M.L. 13

In writing please quote

GOVERNMENT OF WESTERN AUSTRALIA.

MINES DEPARTMENT,
CENTRAL GOVERNMENT BUILDINGS,

AHT/VD 818/51

Correspondents will greatly facilitate
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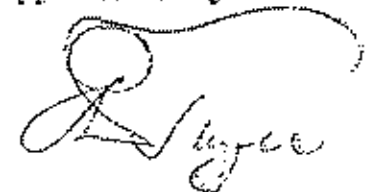
PERTH.....21st September, 1951

COMMISSIONER OF PUBLIC HEALTH:

44

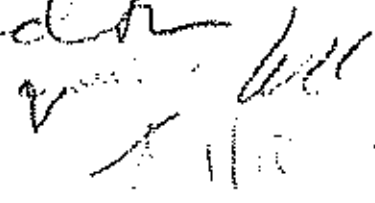
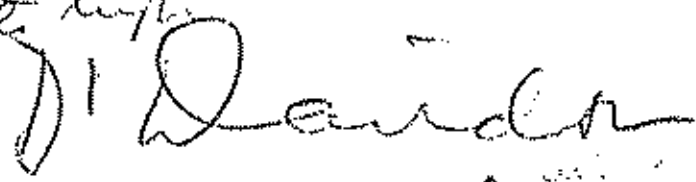
I would acknowledge receipt of your memo.
of the 17th instant, PHD. 618/48.

As desired I attach a copy of the dust counts
and the temperature readings mentioned in paragraph 1 of
Inspector Feichney's report previously supplied to you.



UNDER SECRETARY FOR MINES

When kept last
with copy



PHD. 618/48

Your Ref: 818/51

—BF1351

LA/08

17th September, 1951.

THE UNDER SECRETARY FOR MINES.

I must thank you for your memorandum of the 31st August in which you enclosed a copy of a report of the Assistant Ventilation Inspector concerning the Australian Blue Asbestos Mine at Wittenoom Gorge.

It would be appreciated if you could let me have a copy of the dust counts and the temperature readings mentioned in paragraph 1 of Inspector Bulchney's report.

On reading this report it is noted that the amount of dust particles in the area is high and that the ventilation of this mine needs more supervision.

It is to be noted that the area in the vicinity of the treatment plant is still very dusty.

The interest of this Department is to be understood when it is realised that the hazard from asbestos is considerably greater than that from silica and that we have reason to believe that attention to this aspect of mining operations at Wittenoom has been inadequate in the past.

LINLEY HENDELL
COMMISSIONER OF PUBLIC HEALTH

15
10

PHD.618/48

43
✓
LH/OS

24th August, 1951.

THE UNDER SECRETARY FOR MINES.

Have you received any reports recently from your District Inspector of Mines and from the Dust Inspector with reference to the Australian Blue Asbestos mine at Wittenoom Gorge?

According to reports received by this Department from other sources the dust hazard remains unabated.

LINLEY HENZELL
COMMISSIONER OF PUBLIC HEALTH



GOVERNMENT OF WESTERN AUSTRALIA

MINES DEPARTMENT

CENTRAL GOVERNMENT BUILDINGS

PERTH

M.D. 19

In replying please quote

12/51 X 48/51

Correspondents will greatly facilitate
the transaction of their business by:
Confining each letter to one subject.
Writing on one side only of the paper.

COMMISSIONER OF PUBLIC HEALTH:

I would acknowledge receipt of your memo. of the
24th instant, and attach for your information copy of the
report of Assistant Ventilation Inspector Paichney relating
to Australian Blue Asbestos Mine at Ellenbrook Gorge, which
has now been received.

As a result of Mr. Paichney's visit a full-time
ventilation officer has been appointed by the management
which should have the effect of tightening up the supervision
of ventilation.

The District Inspector of Mines, Inspector Heyland
will take the necessary action called for under the report
mentioned.

*CPH
attained we should
ask him to
get 1 of dust miners
I think ready to
see him*

10/4
also enclosure of mining section 1762
1762

UNDER SECRETARY

Tabulation of Dust Counts

Date	Name	No.	Temp.	TEMPERATURE		Count	Remarks
				Dry	Wet		
3. 8. 1951	Australian Blue Asbestos Ltd., Wittenoom. Treatment Plant.						
						360	Two men employed here in a position open to fresh air. Little dust visible. Strong breeze blowing here.
	Jaw Crusher. Feed and operator's driver's platform.					110	Operator only works here when feed jams.
	Feed to Symon's Crusher					220	Eight men employed here. Position open to fresh air.
	Secondary Picking Section					200	No men employed here permanently.
	No. 1 Rolls - in operation					230	Greater visits position 3 times per day. Warmen dust collector (wet) installed over belt.
	No. 1 and No. 2 grade hogging sections					210	Approx. only one bag of each filled per day. Sample taken whilst bagging in operation. Exhaust fan installed in operation.
	No. 2 Rolls					250	No one employed here. A fair source of dust but exhaust fans collect most of it.
	No. 4 Screen. Discharge from No. 3 Hammer mill.					620	No person employed here constantly. Large source of dust. Exhaust fan installed. Another duct to fan to be installed.

www.fox.com : 4
FOX

Date	Time	Place	Temp.	TEMPERATURE		Remarks
				Day	Nat.	
1934	8:10 A.M.	No. 8 Cleaning Screen	485			Operator in this position only temporary. Wears respirator.
		No. 3 Screen. Treats discharge from Rabbit mill.	330			Dust collector in operation.
		No. 3 Grade. Hoggins section	190			Two men employed here constantly.
		No. 5 Screen Discharge of undersize from No. 3 Screen	460			
		Mill Building	155			Sample taken in centre of building.

Tabulation of Dust Counts

Date	Shift	Place	Temperature		Wind	Remarks
			Day	Neg.		
8.8.1951	10.00	Australian Blue Asbestos Ltd., Wittenoom				
		Upper Seam No. 1 Drive	80	78.5		Bogging. Venturi cloth 40ft. from face. More cloth needed. Dirt partly wet.
		Lower Seam No. 2 L. Drive	77	75		Charging holes. Venturi cloth not completely connected to fan. Cloth approx. 30ft. from face. Fan position poor.
		Upper Seam No. 2 Drive	80	74		Rigged. No miner on shift. Cloth lying on floor.
		" " 2150N Crosscut off	82	77		Bogging. Venturi cloth satisfactory.
		" " No. 3 Drive	83	80		Bored out and rigged down. Cloth approx. 15ft. from face.
		" " No. 3 Reverse Drive	78	69		Bogging. Face approx. 15 ft. from airway. Venturi appliances needed.
		" " No. 4 Drive	83	78		Bogging. (Mech) Cloth approx. 70ft. from face.
		" " No. 5 Drive	83	80		Stripping (No man on shift). Broken dirt partly wet.
		" " 1810N Crosscut	80	76		Rigged. No man on shift. Cloth approx. 30 ft. from face.
		" " 210N Stop Bottom face	78	75		Boring. Face more than 10ft. off airway. Face to connect to ring bored out.
		2107 Stop Top Face	81	80		Scraper operators in stop. No men working at face. Venturi appliances needed.

Tabulation of Dust Counts

10-5-54-1551

10-5-54-1551

Date	Time	Remarks	TEMPERATURE		Remarks
			Dry	Wet	
B. S. 1951	Upper Seam 1140V Stope	No miner working. Scraper operators in stope. Fair current of air circulating.	78	70	
	" " 1150V Stope	Boring. More than 10ft. off airway. Ventilating appliance needed.	76	72	
	" " 1130V Stope	Boring. Ventilation fair.	78	68	
	Lower Seam No. 3 L. Drive	Boring. Venturi cloth approx. 30ft. from face.	73	68.5	
	" " 1740 Rise off No. 4 L. Drive	Charging holes. Venturi cloth needs to be taken up into rise.	79	74	
	(Rise approx. 20ft. above)				
	Lower Seam No. 5 L. Drive	Bogging (hand). Cloth approx. 20 ft. from face.	78	68	
<i>J. M. Fairbank</i> ASSISTANT VENTILATION INSPECTOR OF MINES					

Whilst boring, the machine miner endeavours not to bore in the fibre and thus he is subjected to a little attack by the fibre. The country rock surrounding the fibre is composed variously of a ferruginous sandstone or ferruginous sandstone, both of which rocks have a high silica content.

The high temperatures measured at working places in the mine can be attributed mainly to the factors.

(1) The lack of the use of water on the walls, banks, and faces, of working places, and on the broken dirt either left or being bogged.

(2) The neglect by miners to keep the venturi cloths up to the working places, and a lack of supervision in this matter.

It is felt that ventilation conditions generally would be improved by attention to the above matters. The greater use of water in the mine could be achieved if a process of fibre-drying was incorporated in the treatment plant.

Since my visit to the mine, the Senior Inspector of Mines has been advised that Mr. K. McShane has been appointed Ventilation Officer attached to the company. It is hoped that this appointment will have the effect of improving supervision, and installation of ventilating appliances.

J.H. Feichney (sgd.)

AGRIEST DE VENTILATION MANAGER OF MINES

36

Venturi ducts and cloth were not suspended to the walls and in most cases were lying on the floor of the workings. Cloths were not up to the working face and in no case were they nearer than 15 ft. and this distance varied, being up to approximately 70 ft. in the No. 4 Drive on the Upper Seam.

The selection of the position of the electric fans, used in ventilating the working face in development ends, in some cases was poor. In the particular cases of the 2-L Drive the fan is ahead of an opening to the upper seam and thus causes the air to be recirculated.

The ventilating of stopes requires attention. The use of secondary mechanical ventilation is urged wherever one section of the stope is advanced more than 10 ft. past the general face of the stope.

Ventilation Officer:

At the time of my visit the surveyor was filling the position of ventilation officer. The appointment of a permanent officer is a necessity. Ventilation on this mine needs more supervision as evidenced by the incorrect selection of fan sites as instanced above. The recording of temperatures and action necessary when they are found to be too great, is of great importance, and if possible, dust samples should be taken. More supervision should be given by shift-bosses to the necessity for keeping venturi cloths up to the face, and the co-operation of the miners also obtained.

Treatment Plant:

By comparing the results of dust samples taken during this visit with those taken by Mr. Lloyd in September 1950, it will be seen that conditions have improved. The improvement is probably due to the installation of a ~~new~~ dust collector (wet), and fans which exhaust to atmosphere above the mill building.

The area in the vicinity of the treatment plant appears very dusty and is probably due to the exhaust, from the fans in the plant, drifting down or being forced down by the wind. (The situation of the plant in respect to the walls of the gorge may cause the wind to bear down.) It was suggested that more lengths of ducts would carry the exhaust dust higher and in some measure eliminate the dust nuisance.

Changeroom:

Several drawings of changerooms as in use in Kalgoorlie were obtained and supplied to the mine superintendent. They were discussed and information required was supplied. The present changeroom appears to be too small for the number of men using it and another building will be required. The selection of a site for the new changeroom seems to be the major problem.

General:

On examination of the dust samples, both from underground and the treatment plant, the amount of fibre visible is very small. Some samples appear to have no fibre present, and an estimate of the percentage of fibre present in the air would be very difficult to make.

The development faces are taken over an average of 7 ft. high by 3 ft. wide and contain only a total of 2 inches of fibre in a height of 18 to 24 inches. This gives about 2.5% by area as asbestos.

In stope faces taken 3 ft. 6 inches high and 8 ft. wide the percentage of fibre rises to 5%.

35
Mines Department,
FALGOCHE.
21st August, 1951.

State Mining Engineer,
Mines Department,
PERTH.

Ventilation - Australian Blue Asbestos Mine - Wittenoom

A visit was made to the asbestos mine operated by Australia Blue Asbestos Ltd. at Wittenoom, and underground workings and treatment plant inspected. The attached sheets give the tabulation of dust counts and temperature readings recorded.

In conjunction with the ventilation officer of the mine an air survey was completed and the accompanying plan gives direction and volume of air flow, temperature readings, and dust counts recorded in the air channels.

The following points engaged my attention and were discussed with the mine manager, Mr. Paul Thomas.

Underground:

A fair volume of air (13,560 c.f.m.) enters the mine through the South haulage adit on the upper seam but after flowing approximately 30 feet this volume diminishes to 11,560 c.f.m. and after another 400 ft. the initial volume is diminished to 6,250 c.f.m. - less than half the volume which enters the mine at this particular entrance. Brattices in poor condition and faulty stoppings allow this good air to escape through old workings and short circuit to the exhaust fan. Some of the doors used as stoppings and regulators to the flow of air are of poor construction, and buckled considerably due to concussion from explosions during firing. Some doors need equipping with a self-closing device e.g. strong springs, especially noted was a door near the battery charging station. (Mr. Thomas in reply to this suggestion said that a self closing device had been fitted but had since disappeared and suggested theft.)

On the lower seam 27,260 c.f.m. enters the mine and through winze-rise connections flows to the upper seam, thereby ventilating the workings on the northern side. This air is exhausted by the main exhaust fan.

Intake air.	Upper Seam	13,560	c.f.m.
"	Lower Seam	27,260	
Total Intake air		40,820	c.f.m.

Exhaust Air (Measured past fan)

= 39,930 c.f.m.

Since it is necessary that the asbestos when mined should not be wet the amount of dust particles in the air is high. Especially is this noticed where the ore is scraped into load pockets by scraper bolters. The bolter operator is subjected to this dust. Respirators are in order and will be issued to the bolter operators when received.

Venturi ducts and cloth. It was noted that 6" diam. steel pipes were in use for considerable distances from the fan. The pipes are very satisfactory in resisting damage due to firing, but the loss of efficiency by the fan due to friction loss is high, and the decrease in volume of air supplied, is great. Therefore the use of these 6" diam. steel pipes is underrated (Mr. Thomas says they are endeavouring to secure 10" diam. rubberised venturi cloths).

RECORDS.

Do you have a record on any of the files of an appointment of a Dust Inspector by the Mines Department to Wittenoom (The Blue Asbestos)?

Dr. Henzell would like to know if a report has been received from the Dust Inspector.

Amick

21st August, 1951.

GOVERNMENT OF WESTERN AUSTRALIA.

in replying please quote
618/48

Correspondents will greatly facilitate
the transmission of their documents by:
Confining each letter to one subject.
Writing on one side only of the paper.

MINES DEPARTMENT,
CENTRAL GOVERNMENT BUILDINGS,

AHT/VD

PERTH 25th July, 1950.

COMMISSIONER OF PUBLIC HEALTH:

I am forwarding for your information copies
of reports I have received from the District Inspector of
Mines and the State Mining Engineer in reference to the
Australian Blue Asbestos Mine and plant at Wittenoom Gorge.



UNDER SECRETARY FOR MINES

M. D. Dainton

To note / 1/1

2/10/50

21 NOV 1950

3 OCT 1950

25/7

UNDER SECRETARY FOR MINES.

Inspector Joyland's latest report on the ventilation of Australian Blue Asbestos mine and plant at Wittenoom is hereunder. You will note that he does not anticipate much further trouble in this regard.

I visited this mine myself on the 11th and 12th instant.

Underground ventilation appeared to ~~be~~ be reasonably satisfactory, but conditions in the plant still leave much to be desired. This, however, is being taken care of and the Manager is giving it every attention. One Warman dust collector has been installed, and another was ordered, but was unavailable at the time. A similar unit was therefore constructed at the mine and installed. The second Warman unit is in transit and will be installed on arrival in addition to the two already in use. Following the Inspector's last visit the management is installing a series of suction pipes in the roof of the building, which when in operation will draw off the dust as it forms.

I feel that, under the present management, we will receive every co-operation in this matter.

14th July, 1950.
JGF/S.

STATE MINING ENGINEER.

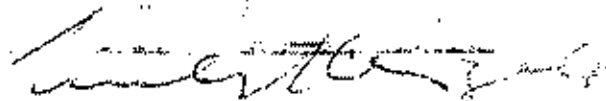
16/26/7

MINES DE ALBERTA

6 - JUL 1950 PHD 618/48

UNDER SECRETARY FOR MINES. RECORDS OFFICE.

Adverting to your minute of the 2nd March addressed to your Hon. Minister, will you please advise the present position in regard to dust hazard at Wittenoom Gorge and ventilation conditions at the Mill.



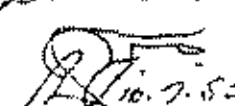
COMMISSIONER OF PUBLIC HEALTH

VLD/MMF
5th July, 1950

C.S.D.

5 JUL 1950

RECORDED

S.M.E. for your advice please.

 12.7.50

COPY from file M.D. 523/48.

MARBLE BAR.
19.6.50.

The State Mining Engineer,
FENTH.

Australian Blue Asbestos, Wittenoom Gorge.

With Workmen's Inspector Hunter I thoroughly inspected the workings on this property and feel confident that in future complaints will be noticeable by their absence.

Although certain improvements were noticeable, there was still much room for more improvement and I called in the Manager, Assistant Manager, Underground Superintendent, and Workmen's Inspector Hunter and laid down a fairly hard policy and left the management fully acquainted as to what was expected and what repercussions would eventuate if that policy was not fulfilled.

As I had already stopped every development place, except two, until adequate ventilation was supplied, I feel confident that the Management now fully understands my methods and knows that supervision must be tightened.

I am satisfied that all matters which were lacking in both underground and milling sections are now being brought up to scratch and Mr. Hunter will pay periodical calls to maintain a high degree of efficiency.

I shall also return to the mine and check up.

(Sgd) J. Boyland

DISTRICT INSPECTOR OF MINES.

P.H.D. 618/49

UNDER SECRETARY FOR MINES.

Inspector Boyland visited Wittenoom Gorge on the 19th and 20th January. His report is at page 139, file 1501/47, tied up herewith. You will note that he has requested the Company to enclose the milling section and instial exhaust dust collectors.

I personally feel that an instruction is required rather than a request, although, as the Inspector remarks, it will be difficult to secure the necessary material.

A further report from Workmen's Inspector Hunter at page 144 on the same file states that nothing has been done to improve the ventilation and that the venturis are still not carried into the face. He proposes to recommend a prosecution if there is not immediate improvement in this matter, and I propose to concur in such recommendation.

At page 141 the Acting Manager reports the appointment of Mr. T. Powell, a surveyor well and favourably known to me, as Ventilation Officer. It is hoped that this appointment will have the desired effect.

I propose to have this matter followed up and to take whatever steps may be necessary to enforce compliance with the Regulations.

1st March, 1950.
JSE/s.

John Fairall
STATE MINING ENGINEER.

HON. MINISTER:

The position is as set out above by the State Mining Engineer, and I would recommend that his report might be forwarded on to the Hon. Minister for Health for perusal by the Commissioner of Public Health.

2/3/50
JST/VD

UNDER SECRETARY FOR MINES

Health Minister for Health

Forwarded for information

24/3/50
For necessary action

Letter

in 3 months

3.3.50
RECORDED

THE HON. MINISTER FOR PUBLIC HEALTH.

I was up in Wittenoom Gorge at the end of 1948, and found that the dust hazard in the present asbestos plant must be very serious. The whole of the surroundings within a radius of one mile or more were smothered with the dust which is produced in the treatment. As far as was ascertainable very few, if any, precautions were taken. Asbestos dust, if inhaled, constitutes a very grave risk and is, if anything, worse than silicosis.

Emily (Lange)

LH/OS
20th February, 1950.

COMMISSIONER OF PUBLIC HEALTH.

THE HON. MINISTER FOR MINES (MR. PARKER).

For comments, please.

24th February, 1950.

MINISTER FOR HEALTH.

C. S. D.

27 FEB 1950

RECORDS.

*A.S. Please advise present position in
view of yr minute dated 7.2.50 (p.78).*

[Signature]
27.2.50

*The M.C. / When will Insp. Boyland visit
Wittenoom Gorge pls?*

[Signature]
27/2/50

4

27

HON. MINISTER:

I have discussed this matter fully with the Acting State Mining Engineer who has advised me that his Inspectors have been carefully watching the dust position at the Asbestos Mill at Wittenoom Gorge.

During the visit by our main Dust inspector in November last he was advised by the Manager that the present treatment plant would be discarded and a new one built, but no action along these lines has yet been taken.

Another Inspector is shortly visiting Wittenoom and he has been asked to go into the matter again with the management, and also to recommend whether he considers the company should be required to appoint a ventilation officer.

This report will be submitted when received.

R. Roper

7/2/50
AHT/VD

UNDER SECRETARY FOR MINES

C.S.D.

18 FEB 1950

RECORDS

Health Advis. for Health.

For g. information

Pratt.

to be reviewed

8. 2. 50

Revised F.C.

Commissioner J.P.H.

Box

Dr. Saint reports that conditions at the Mill where the asbestos ore is crushed are dangerous to health owing to lack of adequate dust suppressing measures.

The Hon. Minister for Mines may please be asked whether or not ventilation officers have been appointed by the Manager and if so what do their records show as to ventilation and dust suppression conditions at the mill?

WSD/FB
9th January, 1950.

ACTING COMMISSIONER OF PUBLIC HEALTH

C. S. L.

92-2-234

RECOMMENDATIONS

H. S. Mason.

Report please

H. L.
See for Review
12.1.50

The Act, T. M. E.

Please see pages 24-27 herewith.
I shall be glad of your report on this
matter. Mr. Adams can probably assist with
recent information.

WSD/FB

28th December, 1949

Dr. Saint,

PORT HEDLAND

Dear Dr. Saint,

The Minister for Mines affirms that Mines Regulation Act is strictly enforced at Wittenoom and all employees are thoroughly examined and must hold a certificate that they are free from Tuberculosis before they are employed.

He also states that the men reported with Tuberculosis were employed in the township and not at the mines.

Will you please inform me :-

1. If you consider suitable precautions are now taken.
2. Did you consider any of the cases of Tuberculosis attributable to the conditions at Wittenoom.
3. Are the works purely mining and therefore under the Mines Regulation Act, or is there in addition any factory or workplace to which the Factory Act may be made applicable.

Yours sincerely,

ACTING COMMISSIONER OF PUBLIC HEALTH

Yours faithfully
William
Smith

ordinary capacity and without a vote.

Finally he considers that the Mines Regulation Act and Regulations should be amended to make provision for the suggestions made under headings (A) and (B) above.

23
DRAFT:

There are a number of aspects of the mining industry which concern the Commissioner for Public Health.

(A) General - Silicosis and Asbestosis:

He is concerned with the occurrence of silicosis and of silico tuberculosis in gold miners, of asbestosis and silicosis in employees of the Australian Blue Asbestos Mine at Wittenoom. At present, through his medical staff, a check on the health of these mine employees is regularly made. However, he feels that his Department could be more actively concerned in the prevention of this disease. For example, he would like to see established a more efficient method of dust counting at Wittenoom. The Koenigsmeter method of counting, used for silica dust, is not the most suitable for the count of asbestos fibres.

He is concerned with problems in other mining fields.

Lead:

In the years 1949-1953, there were more cases of lead poisoning in the mining industry in Western Australia than all other industries. Not less than 30 cases are recorded; many are probably not recorded. This high incidence has occurred despite the relatively few men engaged in the industry which is indeed only of an intermittent nature.

Manganese:

He is concerned with manganese mining. Manganese poisoning may result in a grossly disabling, crippling disease with severe mental changes. This condition has occurred mostly in manganese miners, drilling underground in dry, poorly ventilated conditions. He considers that the manganese mining industry in Western Australia should be assessed by his Department, with a view to the prevention of poisoning rather than to await a first case.

(B) The Mines Regulation Act:

He considers that his Department is best equipped to advise and implement Section 61 (v) of the Mines Regulation Act No. 54 of 1946.

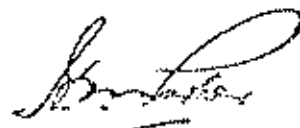
The assessment of the danger of noxious fumes (Regulation 156) should be that of this Department.

The only specific mention of the Commissioner of Public Health is in Regulation 137. This stipulates that he shall be a member of the Mines Ventilation Board in an

HON. MINISTER FOR MINES:

Dr. Saint of Fort Holland has been misinformed as regards precautions taken at the asbestos works at Wittenoom Gorge as the Mines Regulation Act is strictly enforced and all employees are thoroughly examined and must hold a certificate that they are free of T.B. before they can be employed in or about the asbestos works.

The men who were reported as having T.B. at Wittenoom Gorge were employed in the township, which is several miles away from the mine workings.



MINISTER FOR MINES

207 John Street, Perth

HON. MINISTER FOR LABOUR:

15.
With reference to your minute of the 18th November (see folio 16), the question of extending the operations of the Factories & Shops Act has received the consideration of the Chief Inspector of Factories.

He arranged for a proclamation to be put up to extend the operations to Wittenoom Gorge, but after giving the matter consideration, as disclosed by this file, I took the matter up with the Solicitor General, and he points out that that the Factories & Shops Act does not include any mine or colliery, and as the works at Wittenoom Gorge apparently constitute a mine it is not possible to cover them under the Factories & Shops Act.

Therefore it appears as if we cannot assist the Minister for Health in her efforts to enforce improvements and improved working conditions for the employees at the Asbestos Works.

15th Dec. 1949.
CR/HE.

C. A. Lewis
SECRETARY FOR LABOUR.

THE HON. MINISTER FOR HEALTH.

As requested in your minute of the 17th ultimo, the above comments by my Secretary for Labour are forwarded for your information, please.

20th December, 1949.

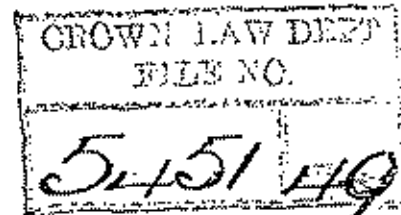
H. Thorn
MINISTER FOR LABOUR.

Com. P. & S. 479/49. To 90/12.
file
FILE.

5 JAN 1950

P & S 479/49
P.H.D. 618/48

SOLICITOR GENERAL.



I forward herewith papers relating to the extension of the Shops and Factories Act to the Wittenoom Gorge Works.

I would be extremely grateful if you could advise as to whether or no the Shops and Factories Act could legally be applied to the Wittenoom Gorge Asbestos Works. I am forwarding this matter direct to you as I understand that Mr. Warman discussed the proclamation with you some time ago.

CR/EC.
8th December, 1949.

C. H. E. W.
SECRETARY FOR LABOUR.

SECRETARY FOR LABOUR:

The term "factory" in the Factories and Shops Act, s. 4 does not include "any mine or colliery, or any place in which machinery is used about a mine or colliery".

2. I am informed by the Asst. Under Secretary of the Mines Department that the works at Wittenoom Gorge of Australian Blue Asbestos Limited consist of works for the mining of asbestos ore. Considerable tunnelling and blasting have been carried out, the ore is brought out in trucks, crushed and asbestos fibre is recovered. All employees are subject to our mining laws and pay into the Mine Workers' Relief Fund. The ground held is held under the provisions of our Mining Act for the purpose of mining for blue asbestos.

3. In these circumstances there can be little doubt but that the works at Wittenoom Gorge constitute a "mine" and therefore the works are excluded from the definition of the word "factory" within the meaning of the Factories and Shops Act.

8th December, 1949.

S. J. P. O. O. O.

CHIEF INSPECTOR OF FACTORIES:

Before passing these papers to the Hon. Minister for Labour for his signature, I should like further information.

I draw your attention to the definition of "factory", subclause (e) which states that "the term factory does not include any mine, or colliery, or any place in which machinery is used about a mine or colliery."

This seems to me to indicate that to issue the proclamation which is now submitted would be completely useless for the purpose we now desire.

Can you advise me, please?

28th November, 1949.
CR/EH.

C. H. E. H.
SECRETARY FOR LABOUR.

Reference : F. and S. 479/49

THE SECRETARY FOR LABOUR :

Please refer to your original minute which raised the question of the application of the provisions of the Act to certain territory, also "Wittenoom Gorge Asbestos Works" was mentioned.

We have no first hand knowledge of all the operations which are carried on. Quarries - lime stone and granite - have been subject to registration since the inception of the Act. Generally speaking, being a building, premises or place having mechanical power or appliances exceeding one horse power, or, if no machinery, then being places employing four (now one) or more persons, etc.

The Wittenoom Gorge Works, as I have observed from reading and pictures, could not be, in a generally accepted sense, a colliery, but a query could arise re the term "mine".

DEPARTMENT OF LABOUR
RECEIVED

- 5 DEC 1949

2nd December, 1949.

C. H. E. H.
CHIEF INSPECTOR OF FACTORIES.

16

FILE # 100-441100

Pharmacy.

11

19

THE FACTORIES AND SHOPS ACT, 1920/48.

Section 165 :

- (1) The Governor may from time to time by proclamation exempt any portion of the State from the operation of this Act, or any Part thereof, and may at any time revoke any such proclamation.
- (2) Whilst any such proclamation is in force this Act or the Part thereof, as the case may be, shall not be operative in the portion of the State thereby exempted.
- (3) Every proclamation made under this section shall within fourteen days of the date of its publication in the Government Gazette, if Parliament is then sitting, be laid on the Table of both Houses of Parliament, and if Parliament is not sitting then within thirty days of the opening of the next ensuing session, such proclamation shall be laid on the Table of both Houses.
- (4) If either House of Parliament passes a resolution disallowing any such proclamation, of which resolution notice has been given at any time within thirty sitting days of such House after such proclamation has been laid before it, such proclamation shall thereupon cease to have effect, but without affecting the validity or curing the invalidity of anything done or of the omission of anything in the meantime. This subsection shall apply notwithstanding that the said thirty sitting days, or some of them, do not occur in the same session of Parliament, or during the same Parliament as that in which the proclamation is laid before the House.
- (5) When a resolution has been passed, as hereinbefore mentioned, notice of such resolution shall be published in the Gazette.

..... 0000000000

CHIEF INSPECTOR OF FACTORIES:

As you are aware, at the present moment, it is not the Government's intention to extend the operation of the Factories & Shops Act generally above the 26th parallel. However, I should like information as to whether it would be possible by proclamation to bring in an isolated area such as the Wittenoom Gorge Asbestos Works.

The file attached hereto discloses the reason why it is desired to take this action.

22nd November, 1949.
CR/EH.

C. E. Hewe
SECRETARY FOR LABOUR.

THE SECRETARY FOR LABOUR :

Section 165 governs this matter, copy appended. The original proclamation exempting from the operation of the Act all that portion of the State which lies to the North of the 26th parallel of South latitude, was published in Government Gazette No. 1., Friday, 7th January, 1921.

In the case of other types of districts, the action which has been taken by the Crown Law Department was to revoke the original proclamation, and prepare and publish another exempting all that portion of the State which lies to the North of the 26th parallel of South latitude, except the territory which lies within a five mile radius of the Wittenoom Gorge Blue Asbestos plant.

Subject to confirmation by the Legal Officers, I submit that the matter of bringing the Wittenoom Gorge Blue Asbestos works within the meaning of the Act may be easily accomplished.

I had some knowledge of this matter unofficially when I submitted the previous recommendation some little time ago for the revocation of the original proclamation in its entirety.

24th November, 1949.
Fw:lw

[Signature]
CHIEF INSPECTOR OF FACTORIES.

15
THE SECRETARY FOR LABOUR.

For your comments, please.

18th November, 1949.

R. Ashwin

MINISTER FOR LABOUR.

14
THE HON. THE MINISTER OF PUBLIC HEALTH:

In February of this year Dr. Saint at Port Hedland drew attention to the unsatisfactory precautions against dust taken at the Wittenoom Gorge Asbestos Works.

During the past month two miners and one carpenter from there have been notified as cases of Pulmonary Tuberculosis.

I understand that certain provisions of the Factories Act have not been made applicable North of 26th parallel. I think it is a matter of some urgency that the matter is taken up with the Minister of Labour and the area brought into line with the rest of the State whereupon a Factory Inspector could in conjunction with Dr. Saint inspect the works and enforce improvements.

J.S. Davidson

WSD/PB

14th November, 1949.

ACTING COMMISSIONER OF PUBLIC HEALTH

THE HON. THE MINISTER OF PUBLIC HEALTH:

You apparently minuted the above to the Minister of Labour. The file is there now.

Further, the Asbestos Company anticipate a population of 500-600 at Wittenoom for the next three years and thereafter a population of 1000.

Sanction for another doctor for the North-west, if not already obtained, is required.

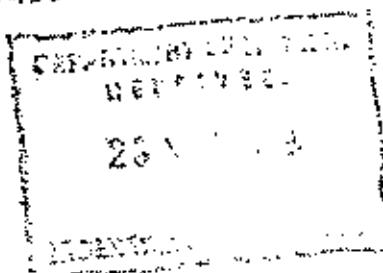
He will be stationed at Wittenoom or Roebourne.

WSD/PB

22nd November, 1949.

J.S. Davidson
ACTING COMMISSIONER OF PUBLIC HEALTH

Sec for Labour
Please advise 23
11/11/49



Chief Inspector of Factories

TO HON. THE MINISTER OF PUBLIC HEALTH:

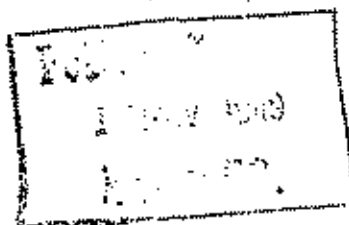
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WSD/PB
14th November, 1949.

W. H. G. G. G.
ACTING COMMISSIONER OF PUBLIC HEALTH



THE HON. MINISTER FOR LABOUR.

Would you please consider whether the Factories Act could be made applicable to the Wittenoom Gorge area.

17th November, 1949.
HPS/LM

Harold Blair
MINISTER FOR HEALTH.

Dr. KINGSLEY.

12
ASBESTOS WORKERS

Herewith reports on asbestosis workers
who were x-rayed at the Perth Chest Clinic on 22.7.48:

Normal range.

slight filling in of the left costo-
paranic angle, suggestive of an old
pleurisy. There is no evidence of
any pathological change in the lung
parenchyma.

There is a partial fusion of the first
and second ribs on the right side.
In addition, there appears to be a
rounded opacity behind the anterior
half of the first rib. This is sit-
uated at the point of fusion of the
two ribs, and the case requires further
investigation. He has been asked to
attend for a further examination.

Normal range.

Normal range.
(exposed to dust 10 months)

There are some rounded, hard opacities
at the right apex, above the clavicle.
As these lesions are partly obscured
by bone, it is difficult to be sure
whether there is radiological evidence
of activity. He has been asked to
attend the clinic for further investigation
(x-ray with dust 10 months)

There are small discrete opacities at
the right apex. The appearances are
consistent with an old, minimal, healed
infection. His x-ray should be repeated
in twelve months. (exposed to dust 10 months)

Normal range. (exposed to dust 10 months)

Director, Tuberculosis Control Branch.

L.W.E.
26th July, 1948.

CPY

10th June, 1948.

Dr. G.S. Saint,
PORT HEDLAND.

Dear Dr. Saint,

I have discussed your X-ray problems with Dr. Benzell particularly with reference to chest work. He agrees as to the great difficulty of doing chest films which are of any value with a portable plant, even if the power supply is all that it should be.

You will appreciate that this question of X-ray installation in small isolated country hospitals is a very difficult one, firstly because of the exigencies of the power supply, and secondly, because of the lack of training of the people who would handle the plant and interpret the films.

It has been the policy of this Department in these small country hospitals to install small plants of the portable type. These are quite good for fracture work, and are usually reasonably adequate for any other bone work. With care they can take a film of a chest which will reveal, at any rate, a gross lesion.

This policy has not been arrived at without an earnest appreciation of the difficulties of the doctor in the outback area. It is paralleled by the difficulties experienced in getting a sufficient pathological service, although the latter may on occasion be more easily overcome by the fact that specimens can be sent through the post, whereas a patient cannot.

In the case of patients who require specialised X-ray investigation, and who live within approachable distance of the Metropolitan area, it is usually found possible to send the patient to Perth. It is agreed that this is very difficult from Port Hedland.

I am afraid that at the present I am unable to do anything further to help you to solve your problems.

In your letter you discuss the asbestos miners at Wittenoom Gorge. Arrangements have just been concluded to have all these men X-rayed before they leave Perth or Melbourne to commence work at Wittenoom Gorge, and the Commonwealth Mobile Laboratory was up there last year, and is due to pay another visit next January. Efforts are being made to make this an annual visit if it can be managed.

Your comments on the "incubation period" of asbestos are interesting, and it is recognised that these workers could easily incur a great hazard than do workers in our gold mines.

When I am up your way again I would like to discuss this matter with you on the spot.

Yours sincerely,

COMMUNICATIONS SECTION, DEPT. OF HEALTH, N.S.W.

10
page 2.

U.S. literature is so enthusiastic, "let it hand".

- (2) What are the chances eventually of getting our own kerosene power plant? The town supply is erratic, liable to break down in the middle of an appendix and gives at some times only about 180 volts to the X-ray machine. The station people get plant inclusive for about £200.

and finally

- (3) Would the Health Department consider an extravagance installing, with (2) a good X-ray plant. These portables you know are not much blasted like the one in a gross Colle's but you are just as likely to miss a hair(?) of the carpal scaphoid, and for chest they can be more misleading than of use. To give you some indication of the need of decent plant in the past 14 days I've seen two lumbar discs that should have been radiographically confirmed; two renal colics that passed flat X-rays and H.O. selections and about half a dozen chest that we need investigating carefully. It's impossible to do good medicine giving cough medicine when you don't know whether you're dealing with a chronic bronchitis, tubercule or carcinoma of the (R main bronchus). Moreover, I've an eye on the future - the asbestos mine at Wittenoom, let the record operators without any sort of dust extractor whatsoever; and since the incubation period of asbestos is so much less than six, in a year or two A.B.A. will produce the richest mass and most lethal crop of cases of asbestosis in the world's literature. I've looked at two spits and found asbestos bodies, not evidence indeed that fibrosis actually present, but clearly proving the absorption of the basic agent. Naturally I think some of these chest could be looked into.

With best wishes,
Yours faithfully,
(sgd) Eric C. Saint.

TRANSLATION COPY : Original no 255/48.

PORT HEDLAND.

June, 6th, 1948.

Dr. C.E. Cook,
Dept. of Public Health,
57 Murray Street
PERTH.

Dear Dr. Cook,

Thank you for your kind letter which arrived yesterday and brought blushes to my cheeks.

It is some time since I sent you a report on the local set up which is beginning to work with tolerable smoothness. The first thing I found necessary to do was to improve the facilities of this hospital. We've tidied the theatre up and put in orders for many essential instruments for abdominal emergencies so that we can now cope with about 3 or 4 tensils a week and we've done about a dozen abdominal operations without disaster or sepsis. The Matron's aid is invaluable; it is a pity she is engaged for but six months for her studied efficiency is a welcome relief to the apathetic grievance prevalent in the H.W. A few structural improvements are pretty urgent and I have appealed to the Under Secretary; new line on the theatre floor, since stone is impossible; a washing sink, a coat of paint in the bathroom or something to separate the sluice and bidpan from the bath and shower.

I have managed to work through about 600(?) natives. There is a fair amount of urgent surgery to do which I shall work in with local facilities. I find it cleaner and more efficient to do all major cutting, white or black in Port Hedland hospital here, for you can well imagine the dangers of doing hemiorthopics (?) at the Lock! There are about five hernias lined up to be done and a couple of (?)sectomies, and eye lunuleation etc. It is of course pretty impossible to collect accurate statistics of native health; only a keen full time man could do that, and one can only go by impressions.

V.D. seems prevalent particularly where the gins and bucks are herded into these ghastly "Twelve Mile Fire Mile" etc. camps where one woman with a chronic G.C. coarctitis can infect dozens of blacks. The interpretation of whose kahns is, I agree most difficult. Of about 20 samples I took for a variety of reasons, eg. Sabre tibiae, nasal discharges (7Gumma) etc. most were positive; whether agglutination was occasioned by tertiary syphilis or yaws is difficult to say. Personally I would say that often objective evidence - such as the prevalence of Nd. I.K., about 4 babes and the odd charcot's point I have seen suggest that Gr. pox is pretty prevalent.

All this has raised subsidiary problems. The Lock Hospital is not large and Mrs. Hand who runs it (away on leave at the moment, thank Christ) is so lazy, I do believe she gets the gin to feed her with a spoon. To run a V.D. clinic needs intensive organisation; 4 hrly. sulphamides, 3 hrly. penicillin good intravenous technique, urethral irrigations for the chronic prostates etc. etc. What do we do about that? It appears to me that Native Affairs want a policy - either -

- (a) Don't bother with the natives; push them back to the bush.
- (b) Make them work as stockmen and give them medical attention. In which case you want something a bit better than one nurse of retiring age in a hospital about to collapse at any moment.

There are three other queries I have at hand:

- (1) Is the combined Diphtheria & Petrusis about which

GOVERNMENT OF WESTERN AUSTRALIA.

In replying please quote

L/1E

LETTERS: BOX 134,
G.P.O., PERTH.

TELEPHONE: 88151.

All communications to be
addressed to the

"COMMISSIONER OF
PUBLIC HEALTH."

DEPARTMENT OF PUBLIC HEALTH.

57 MURRAY STREET,

PERTH.

15th June, 1948.

Dr. A. G. Guthred,
Commonwealth Health Laboratories,
KALGOORLIE.

Dear Dr. Guthred,

Many thanks for your letter of 26th
May concerning the routine examination for miners.

We are undertaking the initial exam-
ination for the men who are going to work at Sittenoom
Gorge. The Mines Department would like us to use the
same forms as are used by you at Kalgoorlie. It
would therefore be very much appreciated if you could
kindly send me down a supply.

It is estimated that we would need
some of all the forms which you sent me, which included:-

Application for Examination for Initial Certificate.
Initial Certificate

THE COMMISSIONER OF PUBLIC HEALTH.

This file will, I think, explain itself.

This morning I rang Mr Foxell, the State Mining Engineer, and Mr Telfer, the Under Secretary for Mines, and discussed the matter with them. As a result, a formal application is to be submitted to you that our department should do these routine examinations for men who desire to work at the Australian Blue Asbestos Ltd., Attenuon Gorge.

In order that these men should be fully covered under the Mine Workers' Relief Act, our examinations would have to conform to those at present given at Kalgoorlie by the Commonwealth Laboratory.

It will be noted that at Kalgoorlie the fee for each examination, which is payable by the man, is 10/6d. This fee is very low for the service rendered, including an X-ray examination, but in view of the extreme public health importance of the control of silicosis, asbestosis and tuberculosis in miners, you might consider that this is the responsibility of the department.

W. H. H. H.

Director, Tuberculosis Branch.

LW/13
1st June, 1948.

W. H. H.

1/12

17th Dec, 1941.

Dr. A. S. Entwistle,
Commonwealth Health Laboratory,
RA 301/117.

Dear Dr. Entwistle,

The Australian Blue Asbestos Ltd.
have approached this department with the request that
we pay the employees of their company prior to
their going to work at Jitteroom Gorge. It is desired
that each of these men obtain a certificate equivalent
to that which is given by the Commonwealth Laboratory
at Kalgoorlie.

It is understood that Mr Foxall, the
State Mining Engineer, has written to you on this
matter.

I would be pleased if you could let
me know the details of the examinations that are nec-
essary, and any other information you could give would
be very helpful. We would like our procedure to be
the same as yours, and therefore your help would be
appreciated.

Yours sincerely,

Lincoln Benzell.
Director, Tuberculosis Branch.

Ref. to 1/12/41
Ref. to 1/12/41
Ref. to 1/12/41

ASBESTOS

AUSTRALIAN BLUE ASBESTOS LIMITED

18 WILLIAM STREET
PERTH

WESTERN AUSTRALIA

MINES & MILLS
WITTENOOM, W.A.

G.P.O. BOX NO. 968 14
TELEPHONE B 2238

14th May, 1948.

Dr. L. Henzell,
Director of Tuberculosis Branch,
Public Health Department,
Murray Street, East,
PERTH. W.A.

Dear Sir,

I wish to confirm our conversation of 11th inst., when we requested that you would be good enough to make the necessary medical examination of employees of this Company, prior to their proceeding to Wittenoom Gorge.

It is desired to obtain a certificate equivalent to that given by the Commonwealth Laboratories at Kalgoorlie.

After our interview, a visit was paid to the State Mining Engineer, Mr. Foxall, who advised that he had already written to the Commonwealth Laboratories asking them to advise you of the necessary details required.

A certificate along the lines suggested from the Commonwealth Laboratories would be acceptable to the Department of Mines. Any cost involved are to be the responsibility of the employees.

As requested, the following is the text of the letter received by us from our Mine Manager at Wittenoom :-

"MEDICAL. Employees before engagement are required to be examined and have a medical certificate as set out in the terms of the Mine Workers Relief Act. At the moment the great majority of our employees engaged in Perth obtain a provisional certificate permissible under the Mine Regulations Act. It is understood that full examinations are possible at the Perth Public Hospital which will give an employee a certificate to comply with the Relief Act. Please visit Perth Public Hospital and find out if this is possible and if there is anything to prevent labour that you engage being sent to the hospital prior to coming here.

Mr. Oliver, of the A.W.U. is taking the matter up with the State Mining Engineer and will probably call on you in the respect shortly. His aim is to facilitate an employee having the same medical service as one engaged in the mines at Kalgoorlie at a similar cost, viz. 10/6d. We concur with this aim.

Thanking you in anticipation.

Yours faithfully,
For AUSTRALIAN BLUE ASBESTOS LTD.,

G. H. Foxall
Perth, Engineer.

TELEPHONE NO. B 6484

TELEGRAPHIC ADDRESS:
"QUARANTINE" PERTH

IN REPLY PLEASE QUOTE

227 / 79

COMMONWEALTH DEPARTMENT OF HEALTH

BOX M 970

G.P.O. PERTH

16th February, 19 48.

Dr. A. N. Kingsbury,
Department of Public Health,
57 Murray Street,
PERTH, W.A.

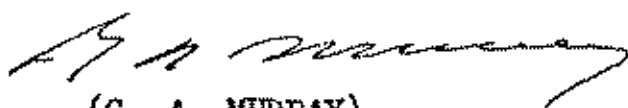
Dear Dr. Kingsbury,

Asbestos Mining:

Referring to your letter 1143/44 of 13th February, the Mobile X-ray Unit examined the workers at Wittenoom Gorge area last year, and will probably do so again in 1949.

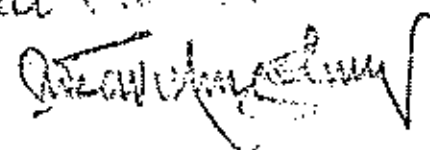
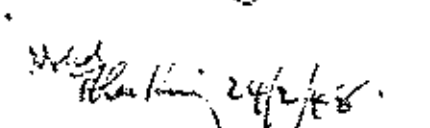
The mining areas to be visited by the Unit are decided by the Mines Department, and I understand that Wittenoom Gorge will be included in the usual visits to Marble Bar and Yilgarn areas every second year.

Yours faithfully,


(G. A. MURRAY)Senior Commonwealth Medical Officer
Western Australia

• Direct TB Branch.
Dr. King

Please see return

19/2/48. 
19/2/48. 

PHD 1143/44.

AMK/GC

13th February, 1949.

Dr. G. A. Murray,
Senior Commonwealth Medical Officer (W. A.)
G. P. O.
PERTH.

Dear Dr. Murray,

Asbestos Mining: Wittenoom Gorge.

May I ask if the workers in the asbestos deposits
in the Wittenoom Gorge area are being periodically examined
by your staff.

Yours faithfully,

(A. Neave Kingsbury)

ACTG. COMMISSIONER OF PUBLIC HEALTH.

THE COMMISSIONER OF PUBLIC HEALTH:

The Tuberculosis Branch is interested in industrial diseases that produce changes in the lungs. These conditions are the pneumoconioses, of which the commonest is silicosis.

Asbestos is mined at Wittenoom Gorge, and it is not known whether the supervision of the health of ~~the men~~ would come under the Laboratory, although this is presumably the case. Commonwealth

In the metropolitan area this asbestos is used in the manufacture of fibrolite for building purposes. At the present, the workers in this industry are not subjected to any medical examination, although it is intended to give them early X-ray examination when the clinic is opened at Cathedral Hall.

Your attention is drawn to the report of 27th January, 1948, from the Director of the Government Chemical Laboratories on some specimens of asbestos powder crushed by the Midland Mining Co. Wheatshed, Bassendean.

L. H. Zell
Linley Zell.
Director, Tuberculosis Branch.

LH/PS
3rd February, 1948.

Mr. Kingsbury

It was intended that 'Air' Comm' should organize an action Section of Industrial Hygiene. Pending Dr. Jones' arrival & your satisfaction, your own duties fully will give place, desiring this matter and Dr. Zell
Dr. Zell

GOVERNMENT OF WESTERN AUSTRALIA.

No. 156/48

GOVERNMENT CHEMICAL LABORATORIES.

ADELAIDE TERRACE, PERTH. 2701

Report on the Samples for :-

The Commissioner of Public Health, Perth.

Lab. No.	Part	Result of Examination.
6070	In connection with hazard to health of workers. Asbestos powder crushed by Midland Mining Co. Wharfedale, Wessenden.	This sample consists of asbestos of the anthophyllite variety (hornblende iron silicate) and occurs in slender aggregates of fibres up to one inch in length and in felted masses of short tangled fibres. Much of the larger fibre is hard and sufficiently pointed to penetrate the skin under moderate pressure and might possibly cause irritation of the skin when handling. The teased material consists of minute, rigid, needle-like forms, the smallest being 12 by 1.5 microns in size. Asbestos is a recognised condition according to a number of authorities and fine dust if present in the atmosphere in sufficient quantity under working conditions could constitute a hazard if not properly controlled.
6071	Talc powder crushed by Midland Mining Co. Wharfedale, Wessenden.	The sample consists of talc powder in minute flakes mostly 50 to 100 microns in size. Some flakes measuring 10 micron across were observed. No quartz or other hard mineral was detected. The smallest particles were larger in size than those recognised as detrimental to health.

RECEIVED

29 JAN 1948

RECEIVED

M.P. Rawlings
M.P. RAWLINGS
DIRECTOR.