FILE NAME: Colonial Sugar Refinery (CSR)

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DOCUMENT DESCRIPTION: Memo from the Kalgoorlie District Hospital with List of Asbestosis Cases & Relation to Work at Wittenoom

McNulty report

DISTRICT HOSPITAL

KALGOORLIE

JMcn:EI.

*Date* 13th January, 1960.

(75)

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?

PLAINTIFF'S EXHIBIT 10387.0

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:- 

Dr. A. King

13th January, 1960.

| Case: | Mining History. | Diagnosis: | Comment: |
|---|---|---|---|
| A. | 3½ years Mill A.B.A.<br>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.<br>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.<br>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.

Dr. A. King 13th January, 1960

| Case | Mining History: | Diagnosis: | Comment: |
|---|---|---|---|
| G. | 15 years gold mining U/G.<br>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. |
| H. | Draughtsman A.B.A.<br>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 |
| I. | 5 years U/G. gold mining.<br>1 year U/G. A.B.A.<br>11½ years Mill A.B.A. | Silicosis & Asbestosis. | Radiologically more like Silicosis than Asbestosis Sputum containing asbestos bodies. Investigated R.G.H. in 1958. |
| J. | 7 years U/G. gold mining.<br>1 year surface gold mines.<br>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. |
| K. | Coal mining Germany 2½ yrs.<br>U/G. A.B.A. 6½ years. | Silicosis. | Diagnosed active Silico-T.B. Extensive lung changes due to Silicosis. |
| L. | 2½ yrs. coal mining - Holland.<br>7 years U/G. A.B.A. | Silicosis. | Minimal x-ray evidence without disability. Has left industry. |
| M. | Radial driller England 20 years.<br>1 year U/G. A.B.A.<br>6 years Mill A.B.A. | Silicosis | Minimal radiological evidence of silicosis. Radial drilling not associated (as far as I ascertain) with risk of Silicosis. No definite disability. |

Memorandum:- 

Dr. A. King. 13th January, 1960.

| 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. |

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.