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Asbestosis

A.B.A. Limited, Wittenoom Gorge W.A.

The Wittenoom Gorge mine was operated by CSR from 1943 to 1966 when it was closed down for economic reasons. During this period, production of fibre rose from a few hundred tons per annum to 15,000 tons and the labour force grew from a few men to about 400 men. Production increased principally in the mid to late 1950's.

As a result of the very high labour turnover, many workmen stayed for short periods only but there was a nucleus of men who stayed for several years and incurred appreciable exposure to asbestos dust.

It has been stated by officers of the W.A. Health Department that there was not a significant incidence of lung disease during the early part of the mining operation when the production of fibre remained low, although working conditions at that time were poor and dusty. The increased production of fibre created a situation where pulmonary disease began to appear after relatively short periods of exposure to dust.

Extent of pneumoconiosis at Wittenoom

In a paper delivered by Dr. P. F. Maguire, of the W.A. Department of Public Health to the 3rd Asia Pacific Congress on diseases of the chest in November 1973, he stated that 142 cases of asbestosis and silicosis/asbestosis have been found resulting from employment at Wittenoom.

In addition to this he reported six cases of pleural mesothelioma (cancer of the pleura due to asbestosis). (N.B. since this report we know of two other deaths from mesothelioma, a Mr. Dibdin in Sydney and a Mr. Quinton in England, both of whom worked at Wittenoom in the 1950's).

Dr. Maguire reported that 28 of the 148 cases were fatal, cause of death being as follows:

pleural mesothelioma	5
cancer of the lung	7
asbestosis, cardio	
respiratory failure	8
coronary thrombosis	4
others	4
Total	28

N.B. a characteristic of mesothelioma is its occurrence some time after exposure. For example, the tumor appeared in one man in 1960 and he was employed in the mill from 1947 to 1949. Similarly, in Mr. Dibdin's case, the tumor appeared in 1974 and he was employed in the mill in 1957.

Mill workers most affected

Findings of the Health Department officers indicated that 68% of the lung infection occurred to people who had been employed in the mill while the remaining 32% of cases were among underground miners.

Some aspects of the Wittenoom asbestosis problem

1) Mill

- (a) The main trouble was the increase in annual production of fibre in the 1950's.
- (b) The mill was worse than the mine. This is possibly accounted for by the fact that men were exposed to dry asbestos dust in the mill while in the mine there was a considerable amount of rock dust diluting the asbestos dust. The vein of asbestos was approximately 9" wide in a 42" stope.
- (c) Costly dust collection systems were installed in the old mill prior to its closure in the late 1950's and were built into the new mill which opened late in 1959. Frequent leaks occurred in the dust collection system which required constant maintenance due to the abrasive nature of the dust being collected.
- (d) Parts of the mill were not adequately protected by the dust collection system, e.g. transfer points on conveyor belts, bucket elevators and hammer mills.
- (e) Bagging of the dry fibre gave rise to a great deal of dust emission which was not adequately controlled.
- (f) A further serious source of dust arose from the use of shovels and brooms in cleaning up spillages.

2) Mine

- (a) In the mine, ventilation was provided by the use of venturi bags which supplied a forced feed of air at the mine face.
- (b) Ventilation was made more complex by atmospheric pollution from the mill which was adjacent to the source of air for the induced draft ventilation system.
- (c) It has been stated that the mine ventilation system was inadequate. In fact, a fresh air shaft was being investigated just prior to closure of the mine.
- (d) Miners were under instruction to use water injection with their drills but this was frequently disregarded because they were on contract and they alleged that drilling was slowed down by the use of water.

Precautions taken at Wittenoom

1) Clinical and X-ray examination

This was started in 1948 by the W.A. Department of Public Health and took the following form:

- (a) Each new employee was given a pre-employment physical examination by a doctor in Perth and was then sent to the Department of Public Health for a chest X-ray which was read by the Mines Medical Officer who then certified the man fit for work on a mining lease.

N.B. A man could not be employed at Wittenoom without this fitness certificate from the Mines Medical Officer.

- (b) Every 12 months a mobile clinic visited the mine and every employee was compulsorily X-rayed.
- (c) Any showing of pneumoconiosis resulted in the man being sent to Perth for further investigation. In this event he was allowed to resume work only if certified fit by the Health Department.

2) Dust Sampling

Dust sampling was started at Wittenoom in the mid 1950's. Findings were suspect because the people doing the testing had insufficient knowledge.

In 1964 Mr. G. Major of the School of Public Health and Tropical Medicine of Sydney University (an expert in the field of air contamination and measurement of this), visited Wittenoom at the request of the W.A. Health Department. He spent some weeks in dust sampling experiments in both the mine and mill. In brief, his report showed high concentrations of asbestos in air in the mill. Concentrations in the mine exceeded safe limits while not being as high as in the mill.

3) Ventilation officer

In early 1963 a full-time ventilation officer was appointed at Wittenoom and he held that position until the mine closed in 1966. His duties included dust sampling, in both the mine and the mill, checking on the adequacy of air supply in the mine, ventilation in the mine and dust extraction in the mill.

4) Respiratory protection

Cartridge type respirators were issued to all employees at operating stations in the mill. Although made available, they were very little used underground by miners or scrapermen mainly on account of heat. Some underground loco crews did use them.

Mill employees did not use them all the time because of the heat.

Wittenoom staff paid particular attention to the selection of proper respirators and had on-the-spot discussions with suppliers.

It is worthy of note that the mine was frequently visited by the Workman's Inspector of Mines and periodically by the District Inspector of Mines and occasionally by the Chief Inspector of Mines. None

of these people commented on the respiratory protection issued by the Company or its use by the men and at no time did they suggest alternative respirators nor did Mr. Major during his visit. The only matters raised by these people during their visits to Wittenoom was the need for improved ventilation in the mine and improved dust collection in the mill.

4) Handling of workers compensation claims

The State Government Insurance Office of W.A. were the sole workers compensation insurers.

The procedure followed with workers compensation claims was:-

- (a) a claim on the S.G.I.O. was initiated at the mine and posted to Perth
- (b) the Wittenoom Personnel Officer had the approval of the S.G.I.O. to recommend that a claim be denied.
- (c) S.G.I.O. payment cheques were returned to the mine and handed to the men

The above applied to routine workers compensation claims and not to pneumoconiosis cases. With these the man claimed direct on the S.G.I.O. in Perth when he was advised by the Health Department that he had the complaint. Admission of liability was entirely vested in the S.G.I.O. The sole job of the mine management in these cases, was to complete an employers report form which was sent to them by the S.G.I.O.

Some expressions of opinion about the Wittenoom problem

1) Dr. McNulty of the W.A. Department of Public Health

The following extracts were taken from a paper presented by Dr. McNulty at the First Australian pneumoconiosis conference held in Sydney in 1968.

- (a) "Perhaps the only medical advice one could have ever given, in view of the dusty conditions and history (at Wittenoom), was 'if you are thinking of going - don't' and 'if you are there - leave' but this was not the advice they wanted. They were making very big money and they wanted to know if they could continue to make this big money".
- (b) "The men, at least in the mill, did try to wear respirators but these could never have been very effective and, in some ways, were just a bad joke. Keener interest and encouragement in the use of respiratory protection would have been worthwhile but the heavy work in very high temperatures would make success unlikely".
- (c) During the course of this conference, Dr. McNulty stated to me that if we had not closed the mine, the W.A. Health Department would have been prepared

to do so.

- 2) Mr. G. Major of the School of Public Health and Tropical Medicine, Sydney University

"It was clear that this installation (Wittenoom) required frequent assistance from an industrial hygienist determined to prevent the generation of dust by the production plant and skilled in the collection of dust before it entered the breathing zone of the workmen. This task would have been time-consuming and should not have been the responsibility of busy mines inspectors; it was clearly beyond the experience of those responsible for production control (at Wittenoom)".

N.E.I.

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