

Dust, Disease and Labour at Havelock Asbestos Mine, Swaziland

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The Havelock/Bulembu asbestos mine in Swaziland, which operated from 1939 until 2001, was a major employer and earner of foreign exchange. For most of its life the mine was owned and managed by the British conglomerate Turner & Newall. The miners of Havelock have recently failed in their efforts to bring a legal action in Britain against that company. Asbestos is a hazardous material and the attitude of management, the absence of trade unions or an effective regulatory authority meant that work conditions at Havelock were harsh. Using internal company correspondence and archival sources it is possible to identify the moment, four years after the mine opened, when Turner & Newall decided the health of its Swazi workforce was expendable.

Introduction

The road from Barberton to the Havelock/Bulembu mine in Swaziland is only passable by four-wheel drive vehicle. The country is mountainous and quite spectacular, but the natural vegetation has been replaced by a drab assortment of eucalypt and pinus plantations. At various points the aerial ropeway which runs for 20 kilometres between the mine and the rail terminal at Barberton is visible. The road enters the mine through a steep cutting and the first buildings one sees are those which once housed the white mine management. The town is encircled by tailings dumps which are 200–300 feet high. The milling process was crude and so the dumps contain large quantities of chrysotile or white asbestos.¹

The mine closed in 2001, having spent its final year reprocessing discarded short fibres. The day I visited Havelock in July 2002 it was windy, and fibre was being blown over the entire settlement, including the primary school. There are only three hundred people still living at Bulembu, including children. For most of its life the mine was owned and operated by the British asbestos company, Turner & Newall (T&N). Faced with a tide of litigation in 2002, T&N took refuge in voluntary bankruptcy, thereby aborting the legal action being taken in a London court on behalf of 600 Havelock miners and their families. Bankruptcy has saved T&N the expense of compensating its former employees and having to pay for the clean-up of the mine site.

The Havelock asbestos mine was, for some decades, the largest single employer in Swaziland and a major source of public revenue. The mine also played an important role in

¹ Unless otherwise indicated, all archival materials cited are from the National Archives of Swaziland. The references to the T&N Papers refer to the archive of Turner & Newall Ltd, held at Manchester Metropolitan University. There were three major commercial varieties of asbestos namely chrysotile (white), amosite (brown) and crocidolite (blue) which are known as amphiboles. Over 90 per cent of the fibre used during the twentieth century was chrysotile. See G. Tweedale, 'Sources in the History of Occupational Health: the Turner and Newall Archive', Social History of Medicine, 13, 3 (2000), pp. 515–34.

² See *Bigboy Bhembe & Others and T&N Limited*, Royal Courts of Justice, Queen's Bench Division, London, 22 September 2000, HQ9901700.

the nation's labour history. Mining began in 1939 and within ten years chrysotile accounted for 70 per cent of the value of Swazi exports.³ By 1960, Havelock was one of the world's major fibre producers. 4 Output peaked in 1976 at 42,000 tons with most fibre being exported to Europe, Africa and the Far East. Havelock went into decline from the mid-1990s and in 2000 output had fallen to 11,000 tons.⁵ The mine closed the following year.

Chrysotile miners in southern Africa faced many of the same problems as those elsewhere including low wages, occupational disease, intractable management and shift work. The men, women and children who mined asbestos were drawn from poor communities and in general they went unprotected by company physicians, trade unions or regulatory authorities. In addition, the mines in South Africa, Zimbabwe and Swaziland polluted the environment and had an intrusive impact upon local communities which became dependent upon them for employment.⁶ Technical factors also made asbestos mining particularly hazardous. An asbestos fibre the diameter of a human hair is actually a cluster of two million individual fibres which could fit onto the head of a pin. If inhaled, minute fibrils can work their way deep into the lungs where they cause asbestosis, lung cancer or mesothelioma, an otherwise unknown cancer of the lining of the lung or the abdominal cavity.

Methods of asbestos ore extraction have varied from open cut to depth mining but the aim of processing fibre is always the same, namely to preserve the mineral's physical properties. For that reason asbestos is milled dry, which means that milling creates dust. After arriving at a mill, ore is fed into primary crushers, then crushed and sorted. The ore is then crushed again, and the fibre lifted off by suction. Consequently the further into the milling process, the more dust that is generated. All asbestos mines in southern Africa, Canada and Australia were hazardous, and as T&N's consultant physician, Dr Peter Elmes, complained in 1987, 'By the nature of their operations mine and mine mill operators find it harder than the user industries to meet agreed international standards and consequently are at risk from the environmental lobbies'. Turner & Newall was keen to run the mines at full capacity but the more ore that was put through the mills, the greater the amount of dust and the higher the risk of asbestosrelated disease. The most hazardous jobs at Wittenoom (Australia), Penge (South Africa) and Shabanie (Southern Rhodesia) were in the bagging sections, where fibre was pressed, often by hand, into hessian sacks.

Asbestos manufacture in Britain was dominated by Turner & Newall Pty Ltd, which had its origins in the Lancashire cotton industry. On the eve of the Second World War, T&N was among Britain's top one hundred companies and its Rochdale factory was the largest asbestos textile plant in the world.⁹ At its peak in the 1970s, T&N accounted for around half of the UK's output. Turner & Newall also dominated chrysotile mining in southern Africa, where its investments were concentrated at Havelock mine in Swaziland and at Shabanie and Gaths (Mashaba) mines in Southern Rhodesia. Those mines, which were crucial to T&N's global success, produced high quality chrysotile.

³ Swaziland Annual Colonial Report (London, His Majesty's Stationary Officer, 1949), p. 133. It was not until the late 1970s that sugar overtook asbestos as the major export earner.

⁴ In 1960 the value of production was almost £3 million. Swaziland Annual Colonial Report (London, Her Majesty's Stationary Officer [HMSO], 1960), p. 43.

⁵ See R.L. Virta, Worldwide Asbestos Supply and Consumption Trends from 1900 to 2000: US Geological Survey Open-File Report 03-83 (Washington DC, US Department of the Interior, 2003), p. 10.

⁶ See M.A. Felix, 'Environmental Asbestos and Respiratory Disease in South Africa' (PhD thesis, University of the Witwatersrand, 1997).

⁷ T&N Papers 0301/1537-1540, 'Visit to Shabanie and Gaths Mines, March 1987, Dr P. Elmes, 14 April 1987'.

⁸ T&N Papers 0301/1537-1540, 'Visit to Shabanie'.

⁹ For a history of T&N, see G. Tweedale, Magic Mineral to Killer Dust: Turner & Newall and the Asbestos Hazard (Oxford, Oxford University Press, 2000).

Turner & Newall used fibre from Havelock and Shabanie in its own factories in the UK, Italy, France, India and South Africa. It also sold fibre to customers in more than 50 countries. The mines were run through a web of subsidiaries, and although routine decisions lay in the hands of local managers, major decisions, especially those relating to expenditure, were made at head office. In addition, the mines were frequently visited by senior staff including medical personnel from Rochdale. The mines were highly profitable, and in 1955 T&N issued a dividend of 25 per cent to its shareholders. Two years later T&N recorded a net profit of nearly £6 million, of which over half came from its southern African mines. The profitability of the mines was dependent upon minimising production costs.

As the result of litigation, it is now possible to recover the history of occupational disease at Havelock with some precision. Internal company correspondence, made public as the result of legal discovery, identifies the numerous ways in which T&N and its subsidiaries failed to comply with occupational health regulations in the UK, failed to warn employees of the dangers they faced, fought hard to frustrate legitimate claims for compensation, and suppressed medical evidence of risk. ¹² The documents relating to T&N's mines suggest that in Swaziland the company's behaviour was even worse.

The Mine

There is no record of the discovery of asbestos in Swaziland. In 1886 a gold concession was granted to two prospectors near the site of what was to become Havelock mine. The prospectors found some gold but the claim was unsuccessful. An asbestos ore body near Havelock was recorded by Izaak Holtzhausen in 1918, when he formed a syndicate. T&N negotiated an option in 1929, and began working both surface and underground deposits. Having found a rich seam of chrysotile, T&N purchased 100 claims for £480,000, at the time the highest amount paid for a base mineral claim in southern Africa. The New Amianthus mine in the Eastern Transvaal was nearing the end of its life and the purchase was part of T&N's acquisitions in the region designed to make the company self-sufficient in chrysotile.

Turner & Newall employed a large workforce to remove the overburden, and by the end of 1931 it had spent £22,750 developing the site. The fibre was of a high quality, and management estimated that there was a massive ore body to a depth of 50 feet. In his 1932 review of the Swazi economy, A.W. Pim provided a brief comment on the nascent mining industry. Pim noted that Havelock would require a large labour force and that if the development went ahead it would be of great importance to the territory. The company would probably ask for public assistance to improve communications at the mine and in organising a labour supply. Pim's predictions proved correct but Havelock's development was hampered by the Great Depression, which brought mining to an end in December 1932. The project was not helped by Havelock's isolation and the lack of infrastructure. The mine is 1,200 metres above sea-level and therefore free of bilharzia, but the mountainous terrain and the rainfall of 1,750 mm per annum made trucking fibre to the railhead at Barberton difficult. In 1936 development work recommenced and a road from Pigg's Peak to Barberton was built. The aerial ropeway, which was designed to overcome the terrain and the poor roads, was also begun. The aerial cars carried bagged asbestos to Barberton, and on their return journey they

¹⁰ See Turner & Newall Annual Report 30 September 1955.

¹¹ See Turner & Newall Annual Report 30 September 1957.

¹² See Tweedale, Magic Mineral and R. Johnston & A. McIvor, Lethal Work: A History of the Asbestos Tragedy in Scotland (East Linton, Tuckwell Press, 2000).

¹³ T&N Papers 219/1021-43, 'Havelock Asbestos Mines (Swaziland) Ltd' (Leaflet, July 1974).

¹⁴ Financial and Economic Situation in Swaziland, Report of the Commission Appointed by the Secretary of State for Dominion Affairs, January 1932 (London, His Majesty's Stationery Office [HMSO], 1932), p. 16.

ferried coal for the mine's power station and food and other supplies for the town. 15 The mine opened in June 1939 and produced four grades of chrysotile as well as special blends on order.

In its first year, Havelock employed 148 Europeans and 1,555 Africans. 16 Most workers were Swazi but there were also migrant labourers from Southern Rhodesia, Nyasaland and Mozambique. The ore was extracted by open caste methods with the rock being broken apart and sorted by hand in stopes or benches. Mining first went underground in the early 1940s, and over the following decades there was a mixture of strip mining and shafts. The high temperatures, the heavy manual labour and the amounts of airborne fibre in the mills and sorting rooms made conditions gruelling. The conveyor belts which took ore to the mills were open and rained dust on the men working below. There were no exhaust fans or attempts at dust prevention. Such machinery would have been expensive to install and operate. There were no compounds, and black workers erected their own shelters on the hillsides. By 1945 there were 3,000 African workers, of whom over a third were Swazis. ¹⁷ The mine soon became the centre of a town with its own school, doctor and recreational facilities. Whites represented at most 6 per cent of the labour force but, until the late 1960s, they held all senior and supervisory positions. They were mostly from the UK but there were also Afrikaners and Portuguese, some of whom had been transferred from New Amianthus when it closed. 18 The T&N mines offered a career for certain classes of white labour, and men would go from one mine to the next. 19 Many African workers were skilled, and they actually trained their white supervisors, although the management's refusal to recognise their capacities or pay them accordingly was a constant source of friction.²⁰ Turner & Newall always denied that there was any basis to that particular grievance.21

White supervisors were often violent and were known as sandanda or 'brainless person.'22 It was not just individual whites who were abusive, and until the mid-1940s it was management policy to beat workers. After the strike in 1944, the Dominions Office protested to the company about the use of flogging. The general manager of Havelock did not deny the charge but explained that such measures were used on most mines in the Union. Even so, T&N agreed that 'smacking' would cease. 23 Conditions may have improved, but the violence did not end. In the early 1960s small contractors were employed to do painting and other maintenance jobs at the mine. They were mostly South Africans and according to Elijah Mavuso, who worked at Havelock for almost 30 years, they often assaulted their Swazi employees.²⁴

The outbreak of the Second World War saw a strong demand for the company's fibre, and in 1940 the Ministry of Supply in the UK declared T&N and a number of its subsidiaries to be Controlled Undertakings. The first year of the war saw profits rise to over £2 million and T&N managed to pay shareholders a dividend of 15 per cent.²⁵ Production at Havelock rose, and asbestos became the key industry in the country. As production increased, so too did the size of the workforce. The system of dry sanitation soon became unhygienic, and management

¹⁵ T&N Papers 219/1021-43, 'Havelock Asbestos Mines'.

¹⁶ Swaziland Annual Colonial Report (London, His Majesty's Stationary Officer, 1938), p. 13.

¹⁷ Swaziland Annual Colonial Report (London, His Majesty's Stationary Officer, 1949), p. 133.

¹⁸ It is unclear from T&N's correspondence exactly when New Amianthus closed but the most likely date is 1936. See N. Dlamini, 'Race Relations in Swaziland: The Case of Havelock Asbestos Mine, 1939-1964' (MA thesis, University of Swaziland, 2001), p. 46.

¹⁹ Interview with Dr Bill Harrison (at Killara, Sydney, 27 August 2002).

 ²⁰ Dlamini, 'Race Relations in Swaziland', p. 46.
21 Labour Officer Report File No. 3049W 11, 'Havelock Mine, 16 October 1962'.

²² Dlamini, 'Race Relations in Swaziland', p. 32.

²⁴ Interview with Elijah Mavuso (Pigg's Peak, Swaziland, 13 June 2004).

²⁵ Turner & Newall Annual Report, September 1940.

acknowledged that it was probably the cause of periodic outbreaks of disease. ²⁶ In 1942, work began on basic facilities including a sewerage system costing £15,000. By the beginning of 1943 the mine was producing 2,000 tons of chrysotile a month, at a cost of around £10 per ton.²⁷ During the war, although there was a high demand for asbestos spare parts were not easily available. Consequently there were severe problems running the mine at full output and carrying out maintenance. Those problems continued after 1945, when the milling and grading plants were still operating at maximum capacity. According to senior management, the strain placed upon existing plants was approaching 'a danger point.'28

Running the mines at full capacity increased the levels of dust. After visiting the mines in 1951, R.H. Turner reported back to the board that the best way to improve conditions was not to push the mills too hard for tonnage, as had been done for a number of years. He also noted of the dust: 'There is little one can do about some of the old mills, where the conditions are very bad.'29 He made no suggestion that the mills should be replaced. Over the next 30 years little changed, and when T&N's consultant physician, Dr P. Elmes, visited T&N's mines in 1987, he commented: 'It is understood that trading conditions are such that it is only possible to sell fibre at a narrow margin and that in consequence the whole operation is only profitable if the throughput is near capacity. At present both mills are working well above their near capacity.'30

Like many British firms, T&N took advantage of apartheid to pay below subsistence wages to black employees in South Africa. 31 While different forces shaped the labour market in Swaziland, Turner & Newall was a less generous employer than its immediate competitors. The minimum wages offered by the Usuthu Pulp Company and the Mhlume Sugar Company were appreciably higher than at Havelock.³² The mine had a high labour turnover, which some officials attributed to the low pay rates. In 1950, the Labour Office in Mbabane suggested that wages at Havelock be increased to overcome the persistent shortages.³³ On average, African wages were around one seventh of white wages: in 1952 European labourers were paid 17s 6d per shift while blacks received 2s 3d.³⁴

Havelock was the largest private employer in Swaziland, and to stabilise the workforce housing was provided for married men and their families. The houses were allocated on the basis of seniority and proof of a valid customary marriage. By 1955, the company had built quarters for over 400 married couples in what T&N claimed was an important step in the evolution of the country's industrial relations. 35 As at other asbestos mining towns like Penge (Limpopo Province) and Koegas (Northern Cape) the housing at Havelock reflected the mine's social structure. The big houses on the hill with three or four bedrooms on large treed blocks with garages were for white management. They were situated well away from the mill and its dust. Below and closer to the mill were the two-room brick houses for black families.

²⁶ Turner & Newall Papers 0027/0339, 'Letter from W. Shepherd, Rochdale to Roland Starkey, Bulawayo, 7 January 1942'.

²⁷ SNA, Reports by the Union Inspector of Mines File No. 330, 'Inspection of Swaziland Mines C.D. Tudhope 13/2/1943'.

²⁸ Turner & Newall Annual Report September 1948, p. 17.

²⁹ T&N Papers 1/1660-3, 'Memo: R.H. Turner's South African Visit, June 1951'.

³⁰ T&N Papers 0301/1537-1540, 'Visit to Shabanie and Gaths Mines March 1987, Dr P. Elmes, 14 April 1987'.

³¹ See Wages and Conditions of African Workers Employed by British Firms in South Africa, Government Observations of the Fifth Report from the Expenditure Committee, House of Commons Paper, 116 Session, 1973-4 (London, HMSO, 1974), pp. 78-9.

³² In 1955 the Usuthu Pulp Company paid 5 shillings 6 pence minimum wage; Mhlume Sugar Company 4 shillings; Peak Timbers 3 shillings 6 pence; and Havelock Mine 3 shillings 4 pence. Draft Regulations Governing Wage Rates File No. 3402/7/1.

³³ File No. 3049, 'Labour Returns, 1950, Havelock Mine'.

³⁴ Swaziland Colonial Annual Report (London, His Majesty's Stationary Officer, 1952), p. 16.

³⁵ African Housing in Industry, File No 3402/1. See 'Housing of Workers at Havelock Mine'.

The same houses were used by up to six single males, and finally there was also a hostel for single men. The housing for both single and married men was cramped and squalid. There was no running water and a single electric light overhead. The houses were located close to the mill so that the men lived with both dust and noise. There was much overcrowding, and visiting wives would have to sleep in a room full of strangers. Robert Dlamini worked at the mine for over 20 years, during which time he would see his family only twice a month. He did not want his wife and children to live at Havelock because it was 'not a good place'. There was no privacy or dignity, and two families would have to stay in one room and share a kitchen. He was also worried about the dust from the mill, which got into the houses.³⁷

From the late 1950s there was a gradual fall in the size of the workforce due to basic mechanisation. In 1956 there were 1,650 labourers but five years later that had dropped to 1,250.³⁸ From 1960 around 100 women were employed bagging, weighing and loading fibre in the mill.³⁹ In October 1962, the 83 women who worked at Havelock received on average R8,65 per month. In comparison the 1,234 unskilled men at the mine were paid R14,14 per month. The roughly 100 men classified as semi-skilled earned on average R25 per month.⁴⁰ Underground miners could earn bonuses and so their pay was marginally higher. There were also different ration schedules for single and married men. The diet appeared adequate with porridge, groundnuts, sugar, dried beans, vegetables, meat and bread.⁴¹ The management claimed that with rations and housing taken into account, the wage for a married man with a wife and two children was worth R40 per month.⁴² The mine also offered a pension scheme and after 20 years' service a married miner would receive a modest lump sum on retirement.⁴³ The high labour turnover meant that few men qualified.

By 1957 quarrying had ceased and all production had gone underground. In 1962 a new vertical shaft was sunk. There were redevelopments in 1964 and 1970 to gain better access to the ore body. The terrain, the high rainfall and run-off required underground pumping stations to control the water, which was piped into the Tutsi River. In the mid-1970s the total workforce, including those at the Barberton Terminal, was around 2,000.⁴⁴

There are two versions regarding life at Havelock. According to T&N, the miners received good wages, worked under excellent conditions and enjoyed benefits such as rations, housing and free medical care. However, according to workers the wages were poor, the work was hard and dangerous and the housing inadequate. We do know that there were four major strikes at the mine between 1944 and 1963. The first, in February 1944, was an important moment in Swazi labour history and was so serious that police reinforcements were called in from Mbabane. The strike was triggered by the unfair dismissal of two workers and a dispute with management over the sale of beer. Some damage was done to mine property and the strikers destroyed the Havelock brewery. In May 1963 the mine was closed by a strike during which the entire black workforce went out, triggering strikes in other industries.

³⁶ Dlamini, 'Race Relations in Swaziland', p. 53.

³⁷ Interview with Robert Dlamini (Pigg's Peak, Swaziland, 13 June 2000).

³⁸ Labour Officers' Reports, File No. 3049, 'Havelock Mine'.

³⁹ Interview with Frank Mncina (Havelock/Belumbu Mine, Swaziland, 10 July 2002).

⁴⁰ Labour Officer Report, File No. 3049W11, 'Havelock Mine, 16 October 1962', 'Schedule Relating to African Employees of Havelock Mine, 17 November 1956'.

⁴¹ Havelock Mine General Correspondence Swaziland Secretariat, File No. 3015S, 'Schedule Relating to African Employees of Havelock Mine, 17 November 1956'.

⁴² Labour Officer Report, File No. 3049W11, 'Havelock Mine, 16 October 1962'.

⁴³ Havelock Mine General Correspondence Swaziland Secretariat, File No. 3015S, 'Schedule'.

⁴⁴ T&N Papers 219/1021-43, 'Havelock Asbestos Mines (Swaziland) Ltd., Leaflet, July 1974'.

⁴⁵ For an account of the strike, see J. Crush, 'The Construction of Compound Authority: Drinking at Havelock, 1938–1944', in J. Crush & C. Ambler (eds), *Liquor and Labour in Southern Africa* (Athens OH, Ohio University Press, 1992); and Dlamini, 'Race Relations in Swaziland', Chapter 6: 'Labour Unrest'.

⁴⁶ See File No. 659, 'Removal of Undesirable Natives from Vicinity of Havelock Mines'.

British troops were called in. There was much bitter feeling about the high rates of pay received by white workers irrespective of their skills. The strikers demanded an increased minimum wage and the dismissal of the compound manager. The dispute resolved little and the discontent about pay and conditions continued.

Throughout its lifetime a high turnover of labour was a feature of Havelock. In 1960, the monthly turnover was 3–4 per cent, which meant the complete replacement of the workforce every three years.⁴⁷ It was management policy to employ a core of stable specialists supplemented by a pool of low-skilled workers.⁴⁸ There were several reasons for the movement of men in and out of the mine, not least the low pay, especially for so-called unskilled labour, and the harsh work conditions. Perhaps most important was the management style of T&N. All the miners I interviewed disliked the way they were treated by grade leaders, section leaders and boss boys. Apart from the dust and the low wages the most frequent complaint was about the lack of dignity in the workplace.

Elijah Mavuso was born near Pigg's Peak and worked at Havelock from 1964 to 1991. He started underground where he did a range of jobs. He shovelled ore into skips and broke large rocks with a hammer. He also worked as a driller and for a time was dynamite safety officer. The blasting created so much dust in the drives that he could not see 15 feet ahead and there were problems with the fumes. There were also accidents underground such as rock falls. It was, he recalls, just work and the pay was not sufficient to live well. On Sundays there were plenty of things to do, such as drinking beer, playing soccer, attending church and traditional dancing. Some of the miners simply slept.

Joseph Phuthuzela was born at Pigg's Peak and worked at the mine from 1973 until 1989. Andreas Dlamini was also born in the district and worked at Havelock from 1979 until 1994. He has fathered 12 children, four of whom have died. Although both men were classified as unskilled workers like Elijah Mavuso, they have detailed knowledge of the production process and a clear picture of where their labour fitted into the mine's operations. ⁵⁰ They are less wellinformed about asbestos-related disease than the former miners I have interviewed in the northern Cape (South Africa) and at Shabanie, in Zimbabwe. In recounting their work histories, Joseph Phuthuzela and Andreas Dlamini divide their time at Havelock between early and late periods, which partially overlap. They both referred to a dramatic change in work practices in the early 1980s, when the bosses' attitude toward the dust changed, and there were practical and educational improvements. That change coincided with partial Swazi ownership of the mine from 1978, when the Swazi government acquired 40 per cent of the stock from T&N. By the late-1980s the mine was being operated by T&N and the Tibiyo TakaNgwane Royal Trust, a broad-based investment company used by government to increase local control of the economy. However, the company was soon in financial difficulties and the Trust was liquidated in 1991, when T&N sold its remaining share. The mine was then saved from closure by the Consolidated Mining Corp of South Africa, which took over operations.

Like many workers, Joseph Phuthuzela spent time as a cleaner sweeping fibre from the mill floor. It was hard work and when there was a spillage from the conveyor the mill filled with dust. Some work teams had vacuums while others used brooms. Joseph Phuthuzela was given a respirator but it was hard to breathe and the dust would still get into his nose. The crushers made a lot of noise and some men acquired industrial deafness. Andreas Dlamini was also a cleaner and for a time he worked packing fibre. There was much dust and

⁴⁷ Labour Officer Reports, File No. 3049W11, 'Labour Report, Havelock Mine, 25 October 1960'.

⁴⁸ Labour Officer Reports, File No. 3049W11, 'Note on a Visit by the Labour Officer, Havelock Mine, 31 July 1962'.

⁴⁹ Interview with Elijah Mavuso (Pigg's Peak, Swaziland, 13 June 2004).

⁵⁰ Interview with Joseph Phuthuzela and Andreas Dlamini, (Pigg's Peak, Swaziland, 12 June 2004).

it was hard to breathe. In the early days there was sometimes so much dust that he could not see a man 20 metres away. Everyone worked eight-hour shifts beginning at 7am. They worked six days a week and on some Sundays would work overtime for double pay. Underground workers earned higher wages, as did section leaders, grade leaders and boss boys. For Joseph Phuthuzela and Andreas Dlamini the wages were poor.

From 1984 conditions improved dramatically. Education was provided regarding the risks, and water sprays were installed. So too were fans. Special teams monitored dust, and every section knew the dust levels. In conformity with the practices on mines in Canada and Australia, warning labels were piaced on the bags of asbestos which left the mill and the wearing of respirators was encouraged. The conveyor belts, which had been a major source of pollution in the mill, were covered. Dust levels declined substantially.

Andreas Dlamini and Joseph Phuthuzela both lived alone at the mine while their families remained in their villages. Joseph Phuthuzela shared a house with several other men; they prepared their own meals and cleaned their own clothes. The houses were full of dust from the mill and tailings dumps. There was also fibre from the men's overalls. Their wives and children worked their small plots at home and maintained their places within the community. The men would return home twice monthly when they took their wages to their wives. If there was a crisis at home, their wives would visit Havelock. Like many of their fellow workers, Andreas Dlamini and Joseph Phuthuzela lived the lives of migrant workers.

Dust and Disease

The dangers of inhaling asbestos were first noted in Britain by Factory Inspectors in 1899. By the 1920s a number of deaths at T&N's Rochdale plant, near Manchester, led to the first medical descriptions of asbestosis, a fibrosis of the lungs caused by the inhalation of asbestos fibre. As lung tissue loses its elasticity, its capacity to function is reduced, thereby causing a progressive shortness of breath. The incidence of the disease in British industry was such that a government inquiry, headed by E.R.A. Merewether and C.W. Price, was set up in 1928.⁵¹ Their report established that asbestosis is a serious disease and that after ten years' employment, industry workers had a 50 per cent chance of disability. Asbestosis can be fatal and will progress even when exposure has ceased. Merewether noted that asbestosis destroys the body's reserve capacity to resist other infections, making even a moderate degree of disability life-threatening.⁵² From 1931, seven years before full-scale production began at Havelock, the British industry was subject to a regulatory framework of dust control, medical surveillance, and compensation.

With notable exceptions the early literature on asbestosis focused on the factory workers of Western Europe who made asbestos-based products rather than the men, women and children who mined asbestos in southern Africa. The first major study of miners was completed in 1930 by a physician employed at a T&N mine in the Eastern Transvaal. George Slade was the medical officer at New Amianthus during the late 1920s. Having noticed a high incidence of pulmonary disability among mill workers, Slade approached management about conducting research. The company agreed, and Slade began an MD thesis.⁵³ Between 1926 and 1930, Slade examined the working conditions at the mine, the incidence of disease, and the effects of the continued dust inhalation. There were no X-ray facilities so Slade conducted a careful physical examination of each worker. He listened to his patients' chests and examined each

⁵¹ See E.R.A Merewether and C.W. Price, Report on Effects of Asbestos Dust on the Lungs and Dust Suppression in the Asbestos Industry (London, HMSO, 1930). See also Tweedale, Magic Mineral, pp. 20-22.

⁵² E.R.A. Merewether, 'A Memorandum on Asbestosis', Tubercle, 15 (1933-34).

⁵³ See G.F. Slade, 'The Incidence of Respiratory Disability in Workers Employed in Asbestos Mining with Special Reference to the Type of Disability Caused by the Inhalation of Asbestos Dust', (MD thesis, University of the Witwatersrand, 1930).

man for changes in weight and skin tone, using illnesses such as bronchitis as indicators of impairment.

New Amianthus was a large chrysotile mine and the mill, which alone employed 100 workers, was so choked with dust that visibility was reduced to a few yards.⁵⁴ Thick clouds of fibre spread throughout the building and clung to the hair, faces and clothing of the workers. Not surprisingly, the sputa of almost all mill hands contained asbestos bodies and 72 of the 100 had shortness of breath, the classic symptom of asbestosis. Most had lost weight. By matching work histories against medical profiles, Slade was able to establish an association between exposure levels and disability.

Slade's was the first MD thesis completed at the University of the Witwatersrand, and it was the first study of occupational disease among asbestos miners. T&N was already subject to dust regulations in its British factories, and the results were potentially damaging. Yet the company made no attempt to improve work practices at New Amianthus. The thesis was never published nor was it cited in the literature.⁵⁵ Slade attended no conferences and having completed path-breaking research he left T&N's employ almost immediately. He never again worked in the field of occupational health. His thesis marks a divergence between two occupational health regimes: British factories, where from 1931 conditions improved as the result of government regulation, and the southern African mines.

George Slade was not alone in warning T&N about the dangers of asbestos mining. In his 1932 official review of the Swazi economy, A.W. Pim expressed concern about future working conditions at Havelock. He wrote:

Should a large labour force be employed at this mine in the future it will be necessary to bear in mind that in working the crushing mills of an asbestos mine the workers are liable to contract a pulmonary disease called 'asbestosis' similar to silicosis so well known on the gold mines of the Rand. Special medical arrangements therefore will be required and probably some scheme of compensation similar to that in operation on the Rand mines.⁵⁶

Unlike Pim, T&N's senior management was well aware that the hazard he feared would arise at Havelock had already been described by George Slade at New Amianthus.

The Crisis in 1943

The Swazi industry was too small to justify its own inspectorate, and from the early 1940s inspections of Havelock were carried out on a regular basis by officers from the South African Department of Mines. The system relied entirely upon T&N's voluntary compliance. The South African inspectors had no authority to issue fines or prosecute or to stop dangerous work that was in progress. As one South African officer lamented: 'Inspectors of Mines and Machinery from the Union of South Africa inspecting mines like this in Swaziland, are in the peculiar position of being welcomed by the Authorities and received rather on sufferance by the mining personnel.'57 It is likely that most inspectors had experience of gold mines on the Rand, which were among the most dangerous in the world, yet often they expressed outrage about conditions at Havelock.

⁵⁴ Slade, 'The Incidence of Respiratory Disability', p. 23b.

⁵⁵ A copy of Slade's thesis eventually found its way into the hands of J.C. Wagner, who in 1954 was appointed Asbestosis Research Fellow to the PRU in Johannesburg. Wagner cited the work in his own thesis and from there it entered the literature, 30 years after it was completed. See J.C. Wagner, 'The Pathology of Asbestosis in South Africa', (PhD, Department of Pathology, University of the Witwatersrand, 1962).

⁵⁶ Pim, 'Financial and Economic Situation in Swaziland', p. 17.

⁵⁷ Reports by the Union Inspector of Mines, File No. 330, 'Report on an Inspector of the Havelock Mine, D.H. Bowden, Swaziland Department of Mines Pretoria, 6/10/1944'.

Little of the machinery at Havelock was fenced, and in the first years of operation there were serious accidents with workers being caught in machines.⁵⁸ One inspector, D.H. Bowden, noted that the crushers and screens were not enclosed. 'The lack of fencing throughout the plant is appalling', he wrote; 'open belts, pulleys and shafting, etc. are to be seen everywhere and would not be tolerated for a moment in the Union.' ⁵⁹ The quarry was unsafe with loose stone tottering 30 feet above where men were working. Bowden said that in South Africa he would have had work stopped immediately and the site fenced off. Every inspector commented on the dust and, as one officer wrote in February 1943, 'Attempts at dust suppression were inadequate and dust was exhausted directly into the air which was caught by the breeze and dispersed all over the mine much of it falling back around the plant and offices and on the houses.'

In June 1943, dust samples were taken for the first time. Almost three-quarters of the underground samples were over 300 ppcc, which the inspector, Mr C. Moerdyk, took to be the maximum safety level. ⁶¹ The readings in the mills all exceeded 2,000 ppcc. ⁶² Moerdyk put the high counts down to the use of non-vented rock drills and the lack of ventilation. He warned:

The accumulation of asbestos dust creates a dangerous condition which if not eliminated soon will result in harmful effects on the workmen employed. In my opinion legislation similar to that applied to the scheduled and the other harmful producing mines in the Union should be called for in order to guarantee the future health of the mine employees. ⁶³

He also recommended that T&N appoint a qualified dust inspection officer. In the plant he found much of the moving machinery was not fenced off and, therefore, unsafe.

Turner & Newall's regional manager in southern Africa, Roland Starkey, was quick to defend conditions at Havelock. He informed the Government Secretary at Mbabane that the company was doing its best but was hampered by a lack of qualified mechanics. According to him, the inspector had failed to understand how difficult it was to control the dust nor did he appreciate the effort being made by T&N. The inspector had mistakenly viewed the problem from the point of miners' phthisis, which involved silica particles of which there were none at Havelock where the dust was benign. Starkey referred to the chrysotile mines at Thetford in Canada, where for more than 40 years operators have been employed in conditions much worse than those at Havelock with no ill effect. 'Further,' wrote Starkey, 'the (New) Amianthus Mine in the Barberton district was operated by my company for 16 years, under similar conditions to Havelock, without calling for an adverse report from Inspectors.'64 He did not want the regulations covering scheduled mines in the Union applied to Havelock, which would have set a safety limit of 300 ppcc. 'To do so', he warned, 'would undoubtedly result in retarding the development of the Mine.'65 It was wartime and his final comment was clearly meant as a threat that if pressured, T&N would close Havelock.

Work conditions were so hazardous that the matter was referred to the Senior Medical Officer in the Swazi administration, Dr John Vickles. From the intellectual isolation of

⁵⁸ Reports by the Union Inspector of Mines, File No. 330, 'Inspection of Swaziland Mines C.D. Tudhope, 13/2/1943'.

^{59 &#}x27;Report, D.H. Bowden, 6/10/1944'.

^{60 &#}x27;Inspection, C.D. Tudhope, 13/2/1943'.

⁶¹ Reports by the Union Inspector of Mines, File No. 330, 'C. Moerdyk, Swaziland Havelock Mine, Inspector of Mines, Pretoria, 2/6/1943'.

^{62 &#}x27;C. Moerdyk, Swaziland Havelock Mine'.

⁶³ Ibid.

⁶⁴ Reports by the Union Inspector of Mines, File No. 330, 'Letter from Roland Starkey, Director New Amianthus Mines Ltd, Bulawayo, to the Government Secretary, Mababane, 20 August 1943'.

^{65 &#}x27;Letter from Roland Starkey'.

Mbabane, Dr Vickles wrote a state of the art assessment of asbestos-related disease and of the risks facing the workforce at Havelock.⁶⁶ It is hard to imagine anyone at that time writing a more accurate or insightful evaluation of the medical literature, except of course T&N which had the benefit of George Slade's research.

Dr Vickles' method was to expose the basic flaw in Starkey's letter, namely his denial of the existence of asbestosis. Vickles quoted from the British and US medical literature which showed asbestos to be a more dangerous dust than silica, with delayed and insidious effects. He explained that X-ray changes were far more difficult to diagnose than with silicosis. Symptoms usually took around five years to appear, which made it all the more important to detect early clinical signs. Vickles informed his superiors: 'From what we do know it would appear that Asbestosis is a much more serious form of pneumoconiosis than silicosis.' He went on: 'A review of the recent literature would seem to indicate that the risk of cancer of the lung developing in Asbestosis is greater than in most pneumoconiosis.' 68

Vickles noted that pneumonia was common at Havelock and he suggested there was a connection with the dust. Most ominously of all, pneumonia increased among men who had worked at the mine for more than four years. Havelock was reaching its fifth year when asbestosis would begin to show up. Vickles noted that 70 per cent of the dust readings were above the 300 ppcc level. 'If as stated conditions at Thetford and Barberton are worse that at Havelock,' he wrote, 'then it would appear that the inspectors concerned were not carrying out their duties in an efficient manner.' ⁶⁹ Vickles believed the mine could only benefit from having the South African miners' phthisis regulations applied.

Having read Vickles' report, the Resident Commissioner sided with T&N.⁷⁰ The Government Secretary, G.J. Armstrong, claimed, against all evidence to the contrary, that the dust readings were much the same as in the Union.⁷¹ The Resident Commissioner had visited Havelock where he had been reassured by Mr Starkey that the dust nuisance would soon be brought under control. Given the wartime restrictions on labour and materials, the administration did not think it feasible to introduce a code of regulations. 'His honour believes that we can rely upon the Company to do their best to combat the nuisance and recommends that the only course is to have the question examined by an expert after the war, who could then draw up a code.'⁷² The decision was hardly surprising. Britain was at war and Havelock's fibre had strategic importance. The mine was also important within the Swazi economy. For those reasons T&N's promise to improve work conditions was accepted.

The administration's decision meant that conditions remained unchanged. When the mine was inspected again by Moerdyk in June 1944, the dust readings in the mills exceeded 1,000 ppcc. ⁷³ C.D. Tudhope, who inspected Havelock four months later, could not disguise his anger: 'It is extremely disappointing to find that so little has been done in regard to dust elimination and guarding of machinery and I feel with Mr. Bowden that the Swaziland Authorities should be informed that unless some notice and action is taken in respect of these reports there seems to

⁶⁶ Reports by the Union Inspector of Mines, File No. 330, 'Memo: Preventative Medicine at the Havelock Mine Dr John Vickles, Senior Medical Officer, Mbabane, 17 December 1943'.

^{67 &#}x27;Memo: Preventative Medicine'.

⁶⁸ Ibid.

⁶⁹ Ibid.

⁷⁰ Reports by the Union Inspector of Mines, File No. 330, 'Minute: Dust Problem at Havelock from G.J. Armstrong, Government Secretary, Mbabane, to the Administrative Secretary to the High Commissioner, Cape Town, 13 April 1944'.

⁷¹ See J. McCulloch, Asbestos Blues: Labour, Capital, Physicians and the State in South Africa (London, James Currey, 2002), pp. 125–7.

⁷² Reports by the Union Inspector of Mines, File No. 330, 'Minute: Dust Problem'.

⁷³ Reports by the Union Inspector of Mines, File No. 330, 'Inspector of Mines, Pretoria, C. Moerdyk, Havelock Mine, Swaziland, 7/6/1944'.

be no good purpose served by continuing the inspections.'74 His report ended with a detailed costing of the time and money spent on an inspection process which he viewed as a sham. His colleague, D.H. Bowden, was also angry. 'I told the manager that if this plant was in the Union of South Africa I should have no hesitation in stopping all work, until such time as the dust conditions were improved and there was no visible dust.⁷⁵ He went on: 'I cannot believe that the Swaziland Authorities really know of these conditions or if they do know that they appreciate the danger of this dust, and its effects on the natives' health.'⁷⁶

With the end of the war the mines inspectorate continued to pressure the company to reduce the dust. At the beginning of 1945, T&N set aside £10,000 as a preliminary sum to improve conditions. According to Starkey, it was difficult to estimate what an effective suppression system would cost and he complained to head office: 'The Inspector of Mines is clamping down on us very severely in this respect and in a recent report stated that had the Mine been in the Union territory (South Africa) he would have closed it down. Without a separate staff of workmen to give constant attention to this work, it is impossible to make progress.'⁷⁷ Starkey complained that inspectors did not understand the dry milling of asbestos. 78 T&N faced a dilemma. The working conditions made it difficult to attract labour but the only way to reduce the dust was to spend a large amount of money on a new plant. None of the T&N mines was safe and no-one knew the cost of engineering dust out of the mills. Management's response was to improve accommodation for blacks and recreational facilities for whites. It built a badminton court and made additions to the Cinema Hall and the Main Club, which were for whites only.⁷⁹ There was a gradual improvement to the Native Village where married employees lived. The company proudly informed its shareholders that in its treatment of labour it was ahead of most mining companies in South Africa.80

Havelock's management enjoyed a close relationship with the territory's administration and as with T&N's mines in Southern Rhodesia it received public assistance.⁸¹ In the mid-1950s, T&N asked the government to contribute on a pound for pound basis to improve the road from the South African border to Pigg's Peak, at a cost of around £25,000.82 The company also asked for a reduction in freight rates on all bulk deliveries. Both requests were granted. In August 1956, D.L. Morgan from the Resident Commissioner's Office finished his tour of duty. On leaving office he wrote to the managing director of T&N operations saying how much he had enjoyed working with the Havelock officials. 'We owe you all a great debt for all you have done to assist the development of the territory.'83

Over the next three decades, T&N was put under no pressure to improve work conditions. In fact, despite the obvious hazard, inspectors were more conciliatory than they had been in the 1940s. During an inspection in June 1954, dust levels in the rock plant, the conveyor belts and in the bagging section were all above 1,000 ppcc. 84 The inspector commented: 'It is obvious that

⁷⁴ Reports by the Union Inspector of Mines, File No. 330, 'Report on an Inspector of the Havelock Mine, C.D. Tudhope, Swaziland Department of Mines, Pretoria, September 1944'.

⁷⁵ Reports by the Union Inspector of Mines, File No. 330, 'Report on an Inspector of the Havelock Mine, D.H. Bowden, Swaziland Department of Mines, Pretoria, 6/10/1944'.

⁷⁷ T&N Papers 0027/0326, 'Letter from Roland Starkey, Bulawayo, to W. Shepherd, Rochdale, 31 January 1945'.

⁷⁸ Ibid.

⁷⁹ Ibid.

⁸⁰ Ibid.

⁸¹ See J. McCulloch, 'Asbestos Mining and Occupational Disease in Southern Rhodesia/ Zimbabwe, 1915 to 1998', History Workshop Journal, 56 (2003), pp. 131-52.

⁸² Havelock Mine: General Correspondence File No. 30155, 'Notes on a Meeting with Messrs. Chubb, Dugmore and West from Havelock in the Government Secretaries Office on August 3rd, 1955'.

⁸³ Havelock Mine: General Correspondence, File No. 30155, 'Letter from D.L. Morgan Resident Commissioner's office to Mr Dugmore, the managing director New Amianthus Pty Ltd, 11 August 1956'.

⁸⁴ Inspection of Mines, Machinery and Boilers, File No. 3015B iii, 'Visits of Inspection - Mines No. 2/1954'.

tremendous efforts are being made by the company to eliminate dust in the mills, and given time to complete the various de-dusting arrangements, it seems likely that conditions will improve during the coming year.' That optimism was misplaced and in the following year another inspector wrote:

In this (treatment) plant there is little point in taking konimeter samples because of the large amount of dust present. The clouds of dust have formed thick layers on every available ledge in this section of the plant. Leaving aside the medical aspect of dust pollution, the condition of this plant (somewhat akin to working at the receiving end of a vacuum cleaner) must cause discomfort to those who have to work in it, and steps must be taken to minimize the amount of dust released into the atmosphere. ⁸⁶

The larger T&N mines had a resident medical officer and a small hospital to care for the workforce. The physician at Havelock from 1955 until 1971 was Dr Bill Harrison. At the age of 24 he qualified from the University of the Witswatersrand medical school and spent more than a decade in general practice, a career interrupted by war service. In May 1953, Dr Harrison took a job as medical officer at Shabanie mine in Southern Rhodesia. He wanted to get away from apartheid and he felt comfortable on mines. He and his wife Doris spent two-and-a-half years at Shabanie which was the largest T&N operation, followed by sixteen years at Havelock, from November 1955.

Havelock was a company town and the only non-mine employees were a storekeeper and a butcher. There was a large workforce and, according to Dr Harrison, conditions were good. The black miners were mostly Swazi, with a smaller number of men from Nyasaland and Mozambique. Harrison believes that the mine workers' wages were generous but the Swazis rarely did a proper day's work. The mine had its own 50-bed hospital, which was probably the only private hospital in the country. A hygiene officer and two Swazi mid-wives were employed there, while Harrison had an assistant medical officer. In addition to caring for the mine employees, Dr Harrison also did GP work with the miners' families. T&N's head office in southern Africa was at Bulawayo and the management used to visit the mines regularly. According to Bill Harrison, they did not take much notice of the Havelock hospital. ⁸⁸ Neither, presumably, were they much interested in occupational health and safety.

When I interviewed Dr Harrison, he did not mention the dust from the mill or the tailings dumps that is cited so often in the company correspondence. He avoided any reference to occupational health or asbestos-related disease and changed the subject whenever I raised those issues. When I suggested that there had been a lot of bronchitis at New Amianthus, he snapped that the miners must have smoked heavily. He went on to tell me that the men at Havelock were perfectly healthy. All employees were given regular X-rays and there was no asbestosis nor any other asbestos-related disease. He thinks white asbestos is more or less harmless. It does not, he assured me, cause mesothelioma nor does it produce the same amount of non-malignant disease as crocidolite. The only occupational disease at Havelock was some silicosis from the host ore.

As senior medical officer, Dr Harrison's major responsibility was for occupational health but it appears he had no input into work practices. He told me that the health issue did not become prominent in 1960 with the publication of J.C. Wagner's work on asbestos and mesothelioma; nor in 1962 when the T&N funded survey in the Northern Cape revealed a pandemic of disease. He was at Havelock when the 1969 UK regulations on asbestos

^{85 &#}x27;Visits of Inspection'.

⁸⁶ Ibid

⁸⁷ Interview with Dr Bill Harrison (Killara, Sydney, 27 August 2002).

⁸⁸ Ibid.

⁸⁹ Ibid.

⁹⁰ See McCulloch, Asbestos Blues, pp. 185-8.

The Turner and Newall Studies

No dust measurements were taken by T&N until 1976, but following bad press and litigation in the UK in 1978, management decided it was time to review the dangers of mining asbestos. All three asbestos-related diseases had been recorded in the northern Cape but until 1978 there had supposedly been no disease at Havelock. Working conditions were similar to those in South Africa and T&N consultant physician, D.P.C. Elmes, believed a survey of mineworkers could save the company from its critics. 'If the lack of serious asbestos diseases at Havelock is confirmed', he wrote, 'then the continued use of chrysolite can be justified provided the manufacturing processes and products are safe.' According to Elmes, it was going to be difficult to identify a group of workers or residents without exposure. 'As the mill and the unsealed tips cause dust contamination extending over the whole community in dry windy weather no "normal" population [sic] can be derived from the population.' 4

From 1978, T&N commissioned a number of surveys. The first, a survey of 271 Havelock workers, found 23 per cent of employees had asbestosis, while the incidence among mill workers was 54 per cent. In addition, 17 per cent of workers had chronic bronchitis and other chest disorders, including pneumonia and tuberculosis, were common. ⁹⁵ Those figures need to be put into context: in 1978 the rate of asbestosis at T&N's Quebec mines was supposedly 5 per cent. ⁹⁶ In April 1980, Dr J.T. Allardice examined 178 mineworkers' wives, all of whom had fifteen or more years' residence, but no occupational exposure. He found twelve definite and ten possible cases of asbestosis. ⁹⁷ Detailed work histories of the women found that they had shaken out their husbands' dusty overalls.

The mines were profitable and T&N was keen to run them at full capacity. But the limitations of the plant meant that greater the amount of ore that was put through the mills, the higher the levels of dust and the higher the incidence of disease. In March 1981, T&N compiled a report on dust at a number of its overseas subsidiaries to determine which of those operations were in excess of then current UK regulations of 2 fibres/ml. At Havelock most of the mill complex was well above that figure and there were serious problems at Shabanie and Mashaba. The report noted that it would be difficult to achieve better results. In the case of Havelock, the only solution was to build a new mill which would have

⁹¹ Interview with Dr Bill Harrison.

⁹² T&N Papers 6/588-90, 'Report on a Visit to Havelock Asbestos Mine, Swaziland 9-12 March 1976'.

⁹³ T&N Papers 0068/0477-85, 'Report on the Feasibility of an Epidemiological Study of Havelock Mine and Mill, Dr P.C. Elmes, 30 June 1978'.

^{94 &#}x27;Report on the Feasibility'.

⁹⁵ T&N Papers 068/448-50, 'Report: Havelock Asbestos Survey, Dr J. Allardice, 29 November 1978'.

⁹⁶ T&N Papers 068/368, 'Memo from H. Hardie to S. Gibbs and C. Newton, 3 September 1980'.

⁹⁷ T&N Papers 68/428-9, 'Memo: Visit to Havelock Dr J.T. Allardice, 14-18 April 1980'.

⁹⁸ T&N Papers 0301/1537-1540, 'Visit to Shabanie and Gaths Mines, March 1987, Dr P. Elmes, 14 April 1987'.

⁹⁹ T&N Papers 285/0591, "Asbestos Dust Levels in Overseas Companies", Executive Committee Meeting, March 1981.

cost £1 million, while at Shabanie and Mashaba T&N's advisers doubted there was any technology which could make the mills safe.

The Legacy

There are no official figures on current disease rates among former miners. The only evidence we have is anecdotal. Of the list of 20 miners I was given to interview by the Nelspruit legal firm of Ntuli, Noble and Spoor Inc., which was involved in the now abandoned Havelock case, eight had died in the previous eighteen months. In addition, most of the miners I spoke with at Pigg's Peak have asbestosis. They receive no medical care and face an uncertain future. When Elphas Sabida retired, he was told he would receive a pension of R7 a month. He received the money for a year or two and when the mine closed the pension stopped. He says the only medicine he has been given is 'a passport to the grave'. 100

The miners and mill hands of Havelock spent their lives doing heavy work and now they are breathless after walking 100 metres. They say their chests are rotten and they cannot serve their families. Instead of looking after their children they are dying. For over 50 years, Havelock was the main source of wage labour at Pigg's Peak. That income was vital to individual families and it sustained the regional economy. The mine's closure has left tailings dumps and a generation of sick men and women. Joel Dlamini has an asbestos corn on his hand and he can feel the fibre burying itself deeper and deeper into his skin. He fears that is what is happening to his lungs. ¹⁰¹

Turner & Newall was a vertically integrated company with mines in southern Africa and manufacturing plants in the UK and elsewhere. The T&N archive shows that management knew far more about the risks of disease than either its employees or the regulatory authorities, and that it chose to keep that knowledge to itself. In 1943, Dr John Vickles made a state of the art assessment of Havelock. T&N's head office managers already had access to Slade's thesis and therefore knew that if Vickles' recommendations were not implemented, at least half of the workforce would contract asbestosis. ¹⁰² It fought hard to resist regulation and made empty promises to improve conditions. The Resident Commissioner's decision to collude with T&N cost the health and lives of an unknown number of men and women. It also lead directly to the plight of the sick and dying miners who today live at Pigg's Peak.

Conditions at Havelock were always hazardous. The worst period for dust and disease was probably between 1950 and 1980, a period covered largely by Bill Harrison's tenure. Perhaps dust levels could have been reduced if sufficient money had been spent, but that ran counter to the ethos which ruled at T&N mines throughout their history. Medical officers like Dr Harrison were in an ambiguous position in having an ethical commitment to their patients while representing the interests of their employers. To a degree they stood between labour and capital. They were members of small and often isolated communities and if they broke ranks, as did George Slade in 1930, they stood to lose their jobs. The T&N orthodoxy which Dr Harrison repeated to me in 2002 was simple: there was no asbestosis at Havelock. That fiction is contradicted by the T&N archive, which reveals that disease was common; it is contradicted by George Slade's study of New Amianthus; it is contradicted by what we know of disease at T&N's British factories and it is contradicted by the testimony of former miners.

There was almost certainly disease at Havelock before Dr Harrison arrived in 1955. We know from the T&N papers there was widespread disease after he left, which suggests

¹⁰⁰ Interview with Elphas Sabida (Pigg's Peak, Swaziland, 13 June 2004).

¹⁰¹ Interview with Joel Dlamini (Pigg's Peak, Swaziland, 13 June 2004).

¹⁰² That was the only conclusion one could reach having read Slade's thesis.

that during his sixteen years at the company, asbestosis went undiagnosed. Decisions about occupational health were far too important to be made at Havelock and they were not made by medical officers like Dr Harrison. Those decisions were probably made at board level. Head office knew a great deal about asbestos-related disease. It collected data, funded research and made sure that certain forms of knowledge did not seep into the public domain. At T&N mines the job of medical officers was to not diagnose asbestosis and to not record occupational disability. The X-ray equipment and weighing of miners at Havelock was probably to some extent a matter of self-deception; it was also no doubt an exercise in public relations. The high labour turnover may have been used by T&N to hide the incidence of asbestosis. Perhaps it was company policy to sack workers the moment they became ill. That had been the policy of Cape Asbestos Pty Ltd, which ran mines in the northern Transvaal. In the process the real costs of production were shifted back onto an already impoverished community.

The attitude of T&N's management toward its African employees was probably the most important factor determining work conditions. Conditions were also influenced by the lack of an effective regulatory authority or trade unions to protect labour from foreign capital. The colonial administration tolerated T&N's behaviour, and the same system of fractured authority saw conditions remain unchanged after Swazi independence. The Swazi state's lack of capacity and expertise gave T&N a free hand, to an extent not seen in South Africa or Zimbabwe. Only in the late-1980s did the Department of Geology in Mbabane take responsibility for inspections. Once the Swazi government and the Tibiyo TakaNgwane Royal Trust became directly involved in the mine's management, work conditions improved but not appreciably. Most of the miners I interviewed at Pigg's Peak were party to the legal action against T&N but they still hope there will be some compensation for their families. The only people who have come into their community are British lawyers. They consulted with the former miners and said they would try to get a case together but nothing has happened. Those who remain at Bulembu live with the tailings dumps.

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