MEMO TO DR.M.SMYTHE

GCP:DO'N PD/EC 104

12th July, 1974.

PLAINTIFF'S EXHIBIT CSR-18

ASBESTOS DUST - COMMENTS ON WUNDERLICH SITUATION

A. SUMMARY

Generally, good progress has been made into effective dust control and dust monitoring. The task now lies in consolidating our position and ensuring that steady progress is still maintained. We must guard against the effects of complacency and laziness.

Good Government liaison and co-operation have been developed. A Code of Practice on Asbestos Dust Sampling/Analysis is almost completed and its basic details have been accepted by most relevant parties. This Code will probably be accepted by the National Health and Medical Research Council and could even be publised under their auspices.

A sound and practical statistical approach is being developed so that compliance (or otherwise) of a factory to the present accepted dust level can be determined with reasonable assurety.

B. A.C. FACTORIES

1. General

The following statements apply to all Wunderlich A.C. factories. Specific aspects not common to all factories are treated separately - See 2, 3, 4.

(a) Background

At present chrysotile (and in some products, small amounts of Amosite) are used in the manufacture of A.C. products.

Crocidolite was used from approximately 1948 to 1959 as part of the fibre mix because of a world wide shortage of chrysotile. Wunderhume (at Rosehill and Sunshine only) used crocidolite from 1962 to 1964.

Normal product mix contains 15% asbestos.

There are strong indications that working conditions, even 10 to 15 years ago were quite dusty, and that conditions prior to 1958 were very dusty. However in general, dust levels are very low now, due to -

In 1958/59 all three factories were converted from dry fibre to a wet fibre process. GCP

(i) significant improvements in exhaust ventilation and housekeeping

(ii) increased awareness of the hazard

(iii) introduction of impermeable bags ~~fibre supply~~ and containerised ~~fibre~~ delivery of asbestos fibres.

Routine dust sampling has been introduced into each factory, and as a total three factory average, after considering all 1974 results to-date, there are approximately

84% of sampling stations less than 2 f/ml
and 93% " " " " " 4 f/ml.

Samples are taken each month at up to 20 to 35 stations throughout each factory by a member of each quality control department. A part-time microscopist (located at Rosehill) prepares and analyses all samples taken at the three factories. The entire scheme is now routine.

b) Future Action Required

(i) Introduce Standard Instructions on Occupation Hygiene aspects to all A.C. factories and ensure that they are implemented and remain so.

(ii) Maintain or increase the present momentum with regard dust control and dust sampling.

(iii) Introduce a regular, formal, Factory Managers' inspection of his factory. Too often, informal "inspections" only take into account vital day to day problems in the production or maintenance areas, and ignore safety and occupational hygiene.

(iv) The above points should hopefully be re-inforced by an occasional factory inspection by top management.

(v) Because of a world wide trend (and strong indications that Australia will be included) plan on eventually replacing all wet scrubbers with bag house filters.

(vi) Ensure that waste asbestos dust and offcuts are not left exposed in tips. Non-toxic fill should cover our waste.

(vii) Make substantial efforts in trying to reduce our waste by recycling or by new product development. Development and engineering design work is in progress in this regard.

(viii) Study the asbestos cement field situation viz. asbestos dust measurements and improved practical techniques in A.C. fixing and handling.

(ix) Introduce medical (i.e. clinical) examination to support the X-ray examinations already being conducted at Sunshine and Gaythorne.

(x) Investigate lastest overseas trends with regard to dust control, legislation and enforcement, A.C. waste and water treatment.

2. Rosehill A.C. Factory

a) Dust Control and Housekeeping

General factory cleanliness (with respect asbestos dust) is reasonable, and has improved outstandingly over the last 2 years. When the second stage of Accessories Dust Control is completed there should be a further improvement.

Fibre storage areas are also satisfactory, but could be improved if all broken bags were repaired at the time of delivery. Also, all fibre spills should be cleaned up immediately.

b) Dust Sampling

Routine, asbestos dust sampling commenced in June 1972.

By averaging all 1974 results to-date, there are approximately

76% of sampling stations less than 2 f/ml

and 87% " " " " " 4 f/ml

c) Medical

Every 2 years, large plate X-rays and clinical examinations are carried out on all asbestos workers, by Dr. Barnes of the Dust Diseases Board (Workers Compensation). Known cases of respiratory problems are examined more frequently.

Five employees with long service have resigned or retired because of asbestos during the past 18 months. Four known long service (greater than 15 years) cases are still employed. Two other unnamed asbestosis cases still work at Rosehill. The Dust Diseases Board cannot divulge the identity of asbestosis sufferers to us - they only tell us the number of cases. Fortunately, most cases inform the Company themselves.

d) Government Contact at Rosehill

(i) To our knowledge, from 1958 the Division of Occupational Health (N.S.W. Health Commission)(DOH) has inspected and measured dust levels on at least 10 occasions. The reports issued by the DOH indicate that quite good corrective action was taken commensurate with the severity and extent of the hazard as assessed by the DOH.

The initiator of these visits was either the DLI, the Dust Diseases Board (DDB) or Wunderlich. Recently, the Miscellaneous Workers Union added themselves to the list.

(ii) At present, no regulations exist that apply specifically to asbestos. Proposed Asbestos Regulations have recently been sent to Industry and other Government and Union bodies for comment. Wunderlich, James Hardie and Bell's Asbestos have submitted identical comments after fruitful discussions between the DOH, DLI, DDB and the Companies mentioned above.

(iii) Several times during the last 2 years, the DLI inspected Rosehill (usually at the request of the DDB). We have good working relations with them, and I ensure that a very frank and honest approach is maintained.

(iv) Without doubt, all of the above mentioned Government bodies appear well satisfied with our housekeeping and exhaust ventilation improvements as well as our general approach to the whole asbestos dust situation.

3. Gaythorne A.C. Factory

a) Dust Control and Housekeeping

Housekeeping was not unreasonable 9 months ago - I am due to visit Gaythorne again in the next two weeks.

Dust control is not too bad, but should be brought up to adequate standard when some $50 000 to $70 000 is spent on a substantial revision of the system.

The sum of $180 000 has been budgeted for the complete modernisation of the fibre blending and treatment plant. This will overcome some very basic inadequacies and also delete a number of dust sources.

b) Dust Sampling

Routine, asbestos dust sampling commenced in September 1972.

By averaging all 1974 results to-date, there are approximately

91% of sampling stations less than 2 f/ml
98% " " " " " 4 f/ml

c) Medical

Normal "premedical" and a large plate X-ray is conducted for all new employees within 5 weeks of engagement.

A further X-ray is taken 5 years later and then at 2 year intervals. for employees not previously exposed to asbestos, while those with a known exposure are X-rayed every 2 years. As usual respiratory problem cases are recalled every 12 months.

Eight employees (with asbestosis) have either retired or resigned in the past 14 years. The last case in December 1972 after 12 years service.

Two employees (with asbestosis) with 34 and 29 years service are still employed.

d) Government Contact at Gaythorne

Not a great deal of contact with the authorities in Queensland. The DLI appear weak and almost non-existent in relation to asbestos. However, Dr. Rathus of the Dept. of Health effectively (even though informally) "administers" the Queensland Asbestos Rule (Factories and Shops Act). Generally, the Factory Manager does all, and perhaps more than asked of him.

4. Sunshine A.C. Factory

a) Dust Control and Housekeeping

Again, housekeeping has generally improved at Sunshine. Dust control equipment appears to be satisfactory at present, even though the wet scrubbers will eventually have to be replaced by bag house filters. The new Factory Manager and his assistent are both keenly aware of the asbestos hazard.

b) Dust Sampling

Routine, asbestos dust sampling commenced in April 1973.

By averaging all 1974 results to-date, there are approximately

86% of sampling stations less than 2 f/ml
95% " " " " " 4 f/ml

c) Medical

Normal "premedical" examinations are conducted before engagement. A large plate X-ray (no clinical examination) for all employees every 12 months by Dr. Milne of the Victorian Health Dept.

There is an unusually low evidence of asbestosis at Sunshine which cannot yet be explained. The last known case retired in 1965 and is even now fit and well, aged 75 years. There is no record of any asbestosis cases having recently retired or still engaged at Sunshine.

d) Government Contact at Sunshine

Very little contact at Sunshine, probably mainly because of the very few asbestosis cases detected there.

The main contact has been with the Victorian Public Health Dept. (Dr. Milne). I visited this department several weeks ago, and told them of our latest dust control measures, and of our routine dust sampling scheme. Considerable good-will was obtained when I showed them a complete record of our dust counts.

C. OTHER FACTORIES

1. Camden Park Metal Factory

a) Background

The only other Wunderlich factory handling asbestos (board) is Camden Park Metal Factory (Adelaide). Here, marine panels and doors are manufactured from Tombo Board (a 30% asbestos, lime-silica compressed board). Generally, some 6 to 12 operators spend 1 to 2 days per month on this task.

b) Dust Control and Housekeeping

Generally, there is every indication that dust levels have been kept quite low. Housekeeping is good; all trace of asbestos dust is removed by vacuum cleaning after each production run is completed.

The Manager and the Foreman of this section appear well aware of the hazard and the operators seem aware of the need for cleanliness and prevention of dust generation.

c) Dust Sampling

There is no routine dust sampling scheme at Camden Park. This will be introduced inside the next 3 to 6 months depending upon the delivery of small personal dust sampling pumps.

Even though several dust measurements taken at Camden Park indicate fairly high, short term concentrations of 2 to 25 f/ml, the operators' total exposure will be quite low because only several days per month are devoted to asbestos handling.

d) Medical

Normal "premedicals" are conducted before engagement. Every 12 months [illegible] are taken of all asbestos workers. General medical

e) Government contact at Camden Park

Minimal at present. The DLI Toxic Dust Section (set up in 1973) is still not very active in the field, but intends to start dust measurements in the near future. Note that the Dept. of Public Health will not carry out normal measurements as in other States of Australia - the DLI will do this for themselves.

I will continue to keep in touch with both departments.

f) Future Action Needed

(i) Establish a minimum, and a 2 yearly large plate X-ray and a clinical examination for all workers handling asbestos.

(ii) Include peripheral personnel in the above examinations,at least initially, if not routine.

(iii) Establish a routine dust sampling scheme

(iv) Establish a routine dust extraction equipment inspection scheme.

D. CODE OF PRACTICES - ASBESTOS

In August 1972, an Asbestos Industry Occupational Hygiene Committee was formed by representatives from:

Wunderlich
CSR Limited
James Hardie
Division of Occupational Health (N.S.W.)
Commonwealth Health Department

At a later date Bell's Asbestos joined, and all minutes are sent to Dept. of Mines (N.S.W.), Chrysotile Corporation (Woodsreef) and Goliath.

In general terms the scope of the committee includes the development of:

(i) Code on Asbestos Dust Sampling
(ii) Code on ASbestos Dust Analysis
(iii) Code on Use of Asbestos Based Products in the Field
(iv) Code on Disposal of Asbestos Based Wastes
(v) Code on the Shipment of Asbestos Based Products.

and perhaps guidelines on:

(i) Asbestos Dust - exhaust ventilation
(ii) Asbestos Dust - vacuum cleaners
(iii) Factory cleaning.

As I am the secretary of this group I volunteered to write a code on Sampling/Analysis. This is almost completed and is out for comment at the moment. A section on statistics is still being formulated and will include the following aspects.

The above section must be included because of the very wide range of variability experienced even under closely controlled circumstances.

Also, we are concerned that most authorities at the present moment are using a quite inadequate basis for testing asbestos processes for compliance with "regulations". Where we should be using the N.H. & M. R.C. guide - viz. "The long term, average fibre concentration of air breathed by the worker should not significantly exceed 4 f/ml ..." Most authorities take 1 to 3, 10 minute samples, and if these exceed 4 f/ml, state that we are over the limit. The committee aims to produce a table showing that for so many samples there is a figure over which, will indicate non-compliance; and under which, will denote compliance. There will obviously be a range of results which will show the need to take further samples.

Since the formation of the Committee, all members have learnt a lot about dust sampling and analysis, and indeed other aspects of asbestos. Judging from information both direct and secondhand from overseas, I would assess that we are up to or better than world standards in many respects.

G. C. Pickford,
ENVIRONMENT CONTROL OFFICER.

c.c. Messrs. J. H. Matthews,
A. C. Locke,
R. W. Singer.
E. C. Ludowici.

CSR BUILDING MATERIALS RESEARCH LABORATORIES
Concord West

Memo. to: Dr. B.M. Smythe 8th July, 1974

From: A.A. Parts AAP:HL

SUBJECT: ASBESTOS SITUATION AT CONCORD

At Concord there are two areas where asbestos is being used. One, the minor one, is in Gyprock jointing cements, and the major use is in Vinyl Floor Tiles.

The asbestos used is chrysotile. No amosite or crocidolite is used on Concord site.

No measurement or monitoring of air-borne asbestos was carried-out before 1970, but since then monitoring has been on irregular basis.

The present N.S.W. Health Department limit on air-borne asbestos is 4 fibres/ml on the basis of weighted average exposure over an 8-hour day.

GYPROCK JOINTING CEMENT MANUFACTURE

In Gyprock jointing cement manufacturing area hazardous levels of fibres were found initially during early surveys. These level were reduced, however, by installing dust-extraction systems promptly a no longer present a hazard. Recently measured (May, 1974) levels ar low (of the order of 0.1 fibres/ml.)

The position with the jointing cements is as follows:

GB100, bedding cement, has been fibre-free since 1962.

GB175, bedding cement, contains asbestos at about 4%, but will be fibre-free as soon as the change can be made in manufactu

X450, all purpose (topping) cement, asbestos-free since 22nd Februa 1974.

GBRM, all purpose (topping) cement, contains about 4% asbestos. Asbestos-free formulation is being field tested.

X90. casein-based all purpose cement, contains about 4% asbestos.

GB100 is also manufactured in Melbourne, the others are only manufactured in Sydney.

One more product, Spray Texture Base, which contains 5% asbestos is used only in Brisbane for spray-on ceilings. The application is carried-out in water dispersion.

The sanding of asbestos containing jointing cements has been measured to give rise to a concentration of up to 19 fibres/ml during th actual operation. With the elimination of asbestos from formulations th should no longer present a hazard.

FLOOR TILE FACTORY

Chrysotile asbestos is used in the VA tile as reinforcing. Present usage is about 37 tons per week, but could go up to about 40 tc per week when line speeds are increased shortly.

Asbestos is received in plastic bags on pallets and is handl fork-lift trucks in the bottom store. Some spillage does occur from b bags and if not immediately attended-to can spread asbestos throughout store. Situation has been bad in the past, but has improved lately.

Asbestos is put into the process at present by manually fil the old supply hopper on top floor. The hopper has an extraction hoo over it to prevent asbestos contamination of air. Some spillage, howe does occur and the suction in the hood may not be quite adequate. As does find its way onto the floor of the whole area where it is periodica swept up. This is not a good practice and a central vacuum cleaning system is being installed to help in housekeeping. Beams, crossmem and high horizontal surfaces are not regularly cleaned on this floor, nc in the rest of the factory.

The long term (2 hr or more) average concentration at th cutting-in station has been ½ to 2 fibres/ml. A snap sample, for 10 minutes, during hopper filling has given 3 fibres/ml. These would b classed as acceptable by present standards.

The new automatic system for handling asbestos from the raw material store is undergoing trials and some spillage does occur. hood and ventilation over the bag opened appear inadequate as eviden

The disposal of empty bags is by means of a hydraulic pres The press has been enclosed with a suction hood, but that hood may not be sufficient. When it was used previously on the top floor asbestos cutting-in station, clouds of dust issued from the cracks and top of the press whenever it operated.

The new pneumatic bulk conveying system operates under positive pressure with its attendant risks of leaks. General opinion in the occupational health field seems to indicate that a suction system (negative pressure) would generally be preferable.

Another area where there is air-borne asbestos is on the Banbury operating floor. Levels of up to 5½ fibres/ml have been mea and these are above the 4 fibres/ml current limit. It is hoped that th new bulk handling system, when in operation, will reduce asbestos, indeed all air-borne dusts. Some doubt, however, exists about the efficiency of hooding over the conveyor on the Banbury floor. The a off-takes are very small in relation to the area covered.

In the floor tile factory, and particularly noticeable from Banbury floor, there is a continued visible haze. This haze carried air-borne asbestos, about ½ fibre/ml, some resin and limestone dust a the rest appears to be fumes (composition has not been determined.)

Practically all dust extraction points are serviced by a central Pulsaire dust collector. The collected dust is fed back into the Banbury in small controlled amounts by a screw feeder. The dust collecting equipment may not have the capacity to cope with all t extra hoods and pick-up points that will be required in connection wit the new bulk handling system.

The following B.M.R.L. reports have been issued dealin air-borne asbestos:

Plaster Mill

05.1111, PR1, 14.7.70
05.1111, PR2, 7.9.70
05.1111, PR3, 9.10.70
05.1111, PR4, 2.12.70

Floor Tile Factory

05.112, PR1, 7.9.70
05.112, PR2, 28.3.73
05.112, PR3, 6.7.73
05.112, PR4, 13.12.73
05.112, PR5, 28.6.74

Combined Plaster & Floor Tiles

05.1111, PR5, 8.6.72
05.01, PR1, 10.8.72

In addition to these, a memo. was written to Mr. A.C. Loc on 17.4.72, the then-factory manager, enclosing photographs showing poo housekeeping during asbestos handling.

A.A. PARTS

Key Words:

Factory Dust, Asbestos, VA Tiles, Plaster, Concord, Health Hazards, Occupational Health.

MEMO TO MR. J. H. MATTHEWS

A.C. file

RWS:DO'N PD/TS 89

5th April, 1974.

INDUSTRIAL HYGIENE - ASBESTOSIS

The following situations exist at Rosehill, Gaythorne and Sunshine asbestos cemer factories:

1. ROSEHILL A.C.

1.1 Premedical Examination: Undertaken by each new employee, prior to engagement, at the Manufacturers Mutual Clinic at Parramatta.

1.2 X-Ray Examinations:

1.2.1 July 1972 all employees X-rayed by Mobile Anti TB Clinic (small plate)

1.2.2 October/November 1973 all employees medically examined and X-rayed by full plate mobile clinic arranged in conjunction with the Workers Compensation (Dust Diseases) Board who interpreted the results.

1.2.3 All employees to be X-rayed every 2 years.

1.2.4 All known cases of asbestosis are recalled by the Board at 6-12 months intervals for re-examination.

1.3 Cost: $8 per employee examined.

1.4 Reporting of Cases

1.4.1 Under existing regulations the Board cannot divulge results other than to the employee concerned or to his doctor with the written consent of the employee.

1.4.2 The factory does not know of any confirmed cases unless volunteered by the person.

1.4.3 Any known cases are moved out of potentially dusty areas.

1.4.4 Some employees make application to the Board of their own volition for an examination and the factory would not necessarily be aware of the examination or the results.

1.5 Known Cases of Asbestosis

1.5.1 5 employees with long service have resigned or retired because of asbestosis during the past 18 months.

1.5.2 4 known long service (greater than 15 years) cases are still employed of which one employee plans to retire in August, another refuses to be move from the laboratory, another is a gatekeeper and a fourth is a foreman in the tile plant formerly from the A.C. factory.

1.5.3 We understand that the condition of an unnamed employee has deteriorat

Review of precautions taken throughout CSR on handling of asbestos

Asbestos is handled on a commercial scale in three areas of CSR

- the Wunderlich asbestos cement factories
- Vinyl floor tiles at Concord
- Gyprock jointing cements at Concord.

No crocidolite asbestos is used. The main fibre is chrysotile but some amosite is used in Wunderlich factories (While cancer of the lung occurs among workers who have had excessive exposure to all types of asbestos dust, crocidolite is considered particularly harmful with respect to mesotheliomas.)

I have inspected the Wunderlich factory at Rosehill and the Vinyl floor tiles factory at Concord in association with Mr. G. Pickford and Mr. A.A. Parts who are concerned with measures to control asbestos dust in these factories respectively. Their reports on the situation in their respective factories are appended. Also attached is a report by Mr. R. Singer on medical examinations in Wunderlich factories. At Vinyl Floor Tiles regular annual medical and X-ray examinations are also carried out.

Some points gathered from my visits and discussions are summarised below.

- In terms of the standards that are now being recommended by such groups as the I.L.O. and U.S. Labor Department there is room for improvement in all CSR factories handling asbestos.
- Regular dust sampling by personnel at Rosehill and contacts with inspectors from the Division of Occupational Health have helped to highlight trouble areas and progressively improve conditions.
- Dust sampling and contacts with D.O.H. have been less at Vinyl Floor Til with consequently poorer results.
- There is scope for more effective design of materials handling equipment and procedures with a view to minimising dust generation in all factories.
- Spillage of asbestos on floors in handling collected dust needs to be reduced in both factories visited.

PLAINTIFF'S EXHIBIT 9593.0

- Regular cleaning schedules of off-floor horizontal surfaces needs to be improved particularly at Vinyl Floor Tiles.

- A particularly bad aspect in all factories is the apparent lack of effective communication of the hazards of asbestos to all personnel.

- Uniform methods and frequency of medical and X-ray examinations should be considered in CSR factories handling asbestos.

This very brief and necessarily limited review strongly reinforces the view that an officer responsible for advising on industrial hygiene in all CSR work places should be appointed as soon as possible.

One of his first tasks should be to recommend on uniform standards for the handling of asbestos and measures to achieve these in CSR factories.

EMS
12.7.74

DR B M SMYTHE